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BUSINESS ETHICS & CORPORATE GOVERNANCE IN HONG KONG NON PROFIT ORGANIZATIONS (NPOs)

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Abstract

- The problem under investigation was-: ethical issues in non-profit governance.
- The participants in this study were: executive and non-executive directors of non-profit organizations in Hong Kong.
- The method, data gathering procedures and complete test names were:
  Pilot study – structured interview for nine participants and mailed questionnaire for 300 respondents.
  Main survey – mailed questionnaire for the remaining 827 respondents.
- The statistical programme used was – IBM SAS Canonical Correlation Analysis, Cancorr.
- The findings, including statistical significance levels were:

  Significant correlation at confidence level of over 0.95 has been found

  between the motive of social responsibility, and behavioural norms, roles,

  official responsibility, power base, actual performance, access to information

  and evaluation of performance.
- The conclusions and implications or applications are:

  The need to use Stakeholder Theory to complement Agency and Stewardship

  Theories in nonprofit governance to achieve more effective board and

  organizational performance.

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Chapter I INTRODUCTION

Overview

In order to improve the performance of non-profit organizations (NPOs), we need effective boards of directors. In order for boards to be effective, and socially responsible, I have hypothesized that the stakeholder theory (SHT) should be adopted, and that directors' attention can be drawn to the importance of the 68 key determinants used in my research questionnaire. SHT states that directors are 'mandated' in their fiduciary relationships to their stockholders to act in the best interests of their stakeholders (Weiss, 1994:29; see also pp. 36-43). Using my model, I shall argue that directors should make decisions based on more than economic and legal consequences (Velasquez, 1992; Steidlmeier, 1992:170-2; Weiss, 1994). My ethical reasoning model (pp. 77-86) assumes that learning to apply SHT is an ongoing process, requiring self-awareness of and reflection on the many influences that may lead to dysfunction. I argue that training based on my model would need to be designed to bring about attitudinal and behavioral changes, manifest in directors' willingness to listen to dissenting views before making decisions (Johnson *et al.*, 1997:285-331). To support my ethical reasoning model in nonprofit governance, I have adopted a multi-disciplinary approach, drawing on arguments from

Management Ethics (ME) (see pp. 35-36) and SHT (pp. 36-43). In the thesis, seven hypotheses were derived from this model (see pp. 77-86). When these hypotheses were tested, their correlations were found to be supported by Canonical Analysis (Cancorr, see p. 149). The implication is that a stakeholder-oriented approach to nonprofit governance harnesses internal motives of service and altruism, and drives effectiveness by giving the directors a firm sense of what should be done by the governing bodies and why.

A major value behind my research endeavor is that, in my opinion, governance as a topic in social sciences should seek to benefit humanity by transforming the world and offering salvation. Agency Theory (AT, see p. 18) and the like resort to the more radical views regarding a darker side of human nature. I argue that the consequences of adopting AT in nonprofit governance can be damaging. I argue that, in contrast, SHT assumes that knowledge, efficiency and innovation are the fruits of people's naturally shared creativity, entrepreneurship and management skills. Leaders who embrace SHT would strive to create a climate to unleash human potential, stimulate production, reduce unemployment, raise GDP and cater for the ethical dimensions of human life (Schroeder-Blair Paper in HKEJD, 1.10.1999:25). The positive spirit of

SHT promises to take care of economic development as well as the social welfare of the weak.

Thesis Topic

My thesis topic is about the ethical issues in NPOs in Hong Kong. Instead of adopting the orthodox approach using AT for corporations, I have adopted SHT approach used in Management Ethics (see pp. 35-6). Factors that I have taken into account include the internal motivation of board members, and other external motivations perceived by them such as norms, roles, power, performance and responsibilities. I develop a normative and interactive model, which holds that the directors, as decision-makers, should continuously learn, adapt themselves to the perceived internal and external motivational factors, and be sensitive to conflict of interest, the working relationships among themselves and the key stakeholder groups in their decision-making process (see pp. 77-86).

Background to the Research

In the early 80s, repeated failures of board members in corporations to discharge their fiduciary duties became headlines in the USA and Europe (Malachowski, 1990; Shaw *et al.*, 1995). At about that time, AT replaced Stewardship Theory (SST, see p. 20), for it was thought to provide a stronger analytical framework in describing corporate problems and prescribing solutions (Mitnick, 1993:4-6). Also in the early eighties,

nonprofit governance became a burning issue when the US Reganite government and the UK Thatcherite State started a series of 'public reforms' (Neubauer *et al.* in Sutton, 1993; Mintzberg in HBR, 7-8.1996; Tricker, 2000; see also p.30). Subsequently, many other OECD members were attracted to this 'managerialist move'. In the late 1980s, the Hong Kong government followed suit and departments affected included health, housing, education, public and urban services, welfare and culture (*Mingpao,* 7.6.1999:B11). It was not obvious whether AT would equally apply to the public or nonprofit sector, or whether some new theories should be developed.

Structure of the Thesis

My thesis is divided into five chapters. Chapter I is a brief introduction to the various ethical and motivational theories and value systems that are crucial to the understanding of human conduct in both the private and public arenas, especially those related to NPOs; the governance theories and practices; and research methodology. Chapter II focuses on the development of my theory, my ethical reasoning model and related hypotheses based on internal and external motivations as expounded by AT, SST, SHT and ME. Chapter III explains on the research methodology used. Chapter IV presents and tabulates data collected and research results.

The last chapter discusses the findings and arrives at conclusions.

Literature Reviewed

Over 60 articles and books have been studied. Other research materials have come from professional journals and the Internet. Materials referred to in the text (total about 290) have been entered into the References (p.211). The scope of the literature review covers the four main topics of normative ethics, management and corporate ethics, nonprofit management and research methodology, as well as supplementary readings in the related disciplines of: philosophy, psychology, sociology, trade union studies, and cases on corporate and nonprofit governance.

Research Problem and Hypotheses

The problem under investigation is the prevalent application of AT or SST to study corporations in general (Mitnick, 1993:4-6) and NPOs in particular (Turnbull, 1997:181; Burton, 2000:200; Clatworthy *et al.*, 2000:166; Vinten, 2000). My thesis will argue that AT, like many economic models used in management and social studies, is inadequate for an understanding of organizational effectiveness. The mentality behind the AT model compresses the multi-dimensional elements (economic, legal, social, political, moral, psychological, sociological etc) of human motives into just one or two planes – economic and legal, often resulting in stressful mutual distrust among the various parties (Drucker, 1989:26). For nonprofit governance in particular, predicting and

controlling human behaviour using economic motives alone may be impossible. It may also be morally wrong (DesJardins *et al.*; 2000:26-33).

In my opinion, since one of the goals of NPOs is to care for the underprivileged and the victims of ruthless competition championed by the private sector (Mitnick, 1973 as in Mitnick, 1993:8 & 95; Nachmias *et al.*, 1997:8-13; Sen, 1999), it follows that NPOs should be governed in accordance with SHT. I have formulated seven hypotheses to test the criterion set of directors' incentives to participate (Mitnick, 1993: 91- 100), and the predictor sets of seven categories (perceived norms, roles, responsibility, power, performance, information and evaluation) regarding the cultural and behavioral dynamics of NPO boards as follows:

*Hypothesis 1, HO1. The stronger the board members' perceived normative orientation (**norm**) towards stakeholder and social responsibility, the more strongly board members will participate because of intrinsic rather than instrumental (extrinsic) motivation.*

*Hypothesis 2, H02. The stronger the directors' perception that the directors are playing active **roles**, the stronger the sense of stakeholder and social responsibility exhibited by both types of members (i.e. Executive and Non-Executive Directors).*

Hypothesis 3, HO3. The stronger the directors' perception that the directors have important ***official responsibility****, the stronger the sense of stakeholder and social responsibility exhibited by the two classes of members.*

*Hypothesis 4, HO4. The stronger the directors' perception that the directors are able to wield expert and referent power (****power base****), the stronger the sense of stakeholder and social responsibility exhibited by the members.*

Hypothesis 5, HO5. The stronger the directors' perception that the directors can beneficially affect the ***actual performance*** *of the NPO, the stronger the sense of stakeholder and social responsibility exhibited by the members.*

*Hypothesis 6, HO6. The more the access that the directors perceive themselves to have to relevant, reliable and useful information (****access to information****), the stronger the sense of stakeholder and social responsibility exhibited by the members.*

*Hypothesis 7, HO7. The stronger the body of evidence the directors perceive is available for directors, upon which to base their judgements concerning whether or not the NPOs were performing well (****performance***

***evaluation**), the stronger the sense of stakeholder and social responsibility exhibited by the members.*

While the criterion set represents the directors' internal motivation, the predictor sets comprise the operationalised factors of external motivations (pp.87-101). The importance of these factors, along with a model linking them together, is further explained in Chapter II (pp. 63-106).

Internal Motivation

I perceive internal motivation (Drucker, 1995; Fukuyama, 1995 & 1999; Tricker, 2000) in the form of moral commitment to be the most important driver for long-term performance (DesJardins *et al.*, 2000:25), in contrast to the economic motives or instrumental motivations embodied in AT as tools for short-term performance. According to ethical theories, individuals should justify their motivations according to some ethical principles or reasoning, and not only in terms of economic benefits (Weiss, 1994). Mitnick (1993:22, 34 & 112) has also argued that the complex of incentive relations can explain behaviour in the decision making process inside the boardroom. Although he emphasizes mainly the agency-principal relationship in AT; he has a wide perspective on board structure, which to him includes situational factors such as group dynamics, performance assessment, power or other means to influence effectiveness (*ibid.*:3); and last but not least, the balance of stakeholders'

as well as shareholders' interests (Keim *at al.* in *ibid.*:129; Barnard, 1938:272).

Ethical Theories[1]

Ethical reasoning is the task of choosing among several equally possible and pressing courses of action, by drawing on virtues and avoiding or exposing vices, as a constraint upon a condition of technological or economic advancement (Weiss, 1994:16-20, 53 & 59-62). Inclusion of the ethical dimension in our economic life may make possible our development towards the higher stages expounded in the Kohlberg's Moral Development Model (see p. 13); and SHT aims to do this for governance (Drucker, 1989:24; Mitnick, 1993:14; Vinten, 2000). Sen (in Chanda, 1999) in his arguments for a linkage between competitiveness and compassion, contends that ethics, welfare, education and development are vital not only to social justice, but also to economic progress in an era of globalization. The broad division of ethical theories into **virtue ethics** (from Aristotle, 384-322BC), **consequentialism** and **non-consequentialism** reflects a central question in moral philosophy – whether the ends justify the means (DesJardins *et al.*, 2000:25-37).

Velasquez (1998:127) champions the integration of moral standards, utility, rights, justice and care into governance for a more balanced

[1] for key philosophical and ethical terms and concepts, see Appendix VI

stakeholder approach in order to preserve and nurture our valuable relationships through attending to other people's needs, values, desires and wellbeing (Vinten, 2000). The process of ethical reasoning entails the exposure to various normative theories, conceptualization of the salient features and detail of the situation, recognition of *prima facie* duties, and iterative consideration of the different perspectives and possible consequences, before eventually selecting a prudently argued course of action (Weiss, 1994:16-20; Velasquez, 1998:127).

Virtue Ethics

According to virtue ethicists, an agent should ask the questions of 'How ought I to live?', 'What kind of person should I be?', or 'What is honorable, fair, noble, generous etc.?' rather than looking for exact rules to specify what ought to be done. The answers to these questions generate a list of desirable virtues that bind one's relationships with others (Aristotle in Shaw *et al.*, 1995; Velasquez, 1998:130-9; DesJardins *et al.*, 2000:25-6).

In similar vein, the classical Confucian approach to virtue ethics uses ritualistic principles (禮, *li*) to incorporate the right way of behaviour (道, *dao*) (先義後私利是正道 in Hung, *et al.*, 1998:3 & 151-5). Derived for sustaining social harmony, key Confucian virtues such as humanity (*ren* 仁), ritualistic principles (*li*禮), righteousness (or morality, duty; *yi*義),

frugality (*lian*廉), *guanxi* (關係) and shame (guilt, conscience; *chi*恥).

Consequentialism - Egoism and Utilitarianism

Psychological egoists, traceable to Machiavelli and Hobbes, practically deny any possibility of altruism (Batson, 1991; OU, 1979; DesJardins *et al.*, 2000:36-7). They view all human actions, even in helping others, as motivated by overt, covert or sub-conscious self-interest. To philosophers like Nietzsche and Rand, altruism is self-deception; only power, rationality, self-expression, self-esteem and productivity are important values (Batson, 1991; Rand in Gladstein, 1984). Several management theorists, e.g. Friedman and Sternberg, have enlisted the concept of egoism or Social Darwinism in their argument for the practice of relentless profit maximization in corporate governance (Vinten, 2000:36-42).

Bentham and Mill, pioneers of traditional utilitarianism, also assume universal egoism, but contend that the motivational force behind our action is the subjective and situational 'principle of utility' (Weiss, 1994:66-7; Velasquez, 1998:72-83). To them, ethics is merely a means to happiness. Thus, utilitarian directors may practise 'ends justify means' consciously or unconsciously. When they serve as non-executive directors (NEDs) in NPOs, they may not discriminate between instrumental goods and intrinsic goods, and seek economic performance rather than enduring purposes and social responsibility, and may neglect the legitimate moral

claims of comparatively powerless stakeholders (Mitnick, 1993).

In contrast, with reference to the application of utilitarianism to the study of organizational behaviour, one branch of developmental psychology looks toward some higher motives, notably self-actualization and self-realization (Maslow in Handy, 1976:23-52; Mitnick, 1993: 14-8). Butler, Rousseau, Hume and Smith have also contended that under certain circumstances, egoistic motivation can co-exist with 'some self-restraint, moral sentiments, impartial sympathy in their economic and commercial lives (Smith, 1986:preface)', often acting from a sense of justice, friendship, compassion, gratitude, generosity, sympathy and affection (Batson, 1991).

Non-Consequentialism

Ethicists such as Kant criticize utilitarianism for not adhering to the universal principles of rights and justice (Kant's Categorical Imperative), resulting in possible longer-term 'destructive achievement' for the organization or community (Vinten, 1990 & 2000). Singer (1991) suggests that the solution to the competing views in ethics, e.g. virtues, utility and golden rules (deontology), may be the accommodation of each perspective of morality that forms the common core. Each view helps people to see a bit more of the whole complex ethical framework, so as to enable them to make sense of the series of issues in ethical dilemmas.

Snell (1997) similarly argues that a convincing approach to ethical dilemmas should be 'reasoned principles plus moral character'.

Other Psychological Perspectives

While Social Darwinism manifests the aspect of peoples' single-minded struggle to survive; behaviorists like Skinner, Bandura and Barlett argue that we can only understand human behaviour and experience by studying the relationship between behaviour and the environment in which the behaviour takes place. In particular, Social Learning Theory (SLT, see pp. 70-1) posits that individuals develop hypotheses about the relationship between their own behaviours and future consequences (efficacy/outcome expectations) on the basis of their experience (the continuous reciprocal interaction) and observations that constitute a feedback loop (Bandura in Batson, 1991 & in Gross, 1996:173 & 688-93).

Kohlbergian Moral Development Model

Kohlberg's model (Kohlberg, 1969, 1973, 1981 & 1984 in Gross, 1996: 12-3 & 697-705) raises both philosophical and epistemological questions about moral development. His model clearly shows that our ethical reasoning capacities improve as we move away from egoism to altruism and as we become more critical of the moral standards that we hold. The concept of his model is more concrete and less abstract than moral

philosophy, and is widely applied in the development of both education and management (Snell, 1993:13-4; Gross, 1996:698; Velasquez, 1998: 4-30). Each of his six stages can be related to some ethical principles, and to the analysis and reflection inherent in ethical reasoning (Velasquez, 1998:30).

Decision-Making

Both the SHT approach and participative management emphasize the 'bright side' of group decision making. Thus a group can form an expanded **information** base to enable its members to better understand the tasks at hand, exchange views on probable difficulties and solutions, and participate as effectively as possible (Johnson *et al.*, 1997:4). Ideally, a group can exert corrective and constructive influences in the analysis and evaluation of information, so that the differences of their opinions, perspectives and interests can be resolved more satisfactorily (*ibid.*; Bower, 1997; MDC, 1999:92).

But group decisions do not necessarily guarantee effectiveness, let alone efficiency. Potentially adverse group influences are often referred to as the pressure to conform, groupthink, bystander apathy and diffusion of responsibility etc. (Janis, 1993; Shaw, 1999:32-3). In boardrooms, group pressure or norms may work both ways. That is to say, an unethical

organization can induce or allow a person to behave unethically; whereas a conscientious group can encourage its members up onto a higher moral ground. Therefore, concepts and skills in handling group problems, including group dynamics and argumentation, are considered important attributes (Gouran, 1982).

Some group characteristics that may have strong influence on the effectiveness of the decision-making process as well as of the decision (Lewin in Johnson *et al.*, 1997:11-5) include: **size** and **composition** of the board (Tricker, 1992; Shotter, 1993), the **power** base and power distance among members (Johnson *et al.*, 1997:401-41), **roles** (Benne *et al.* in Buchanan *et al.*, 1997:226; Johnson *et al.*, 1997:20), and **behavioral norms** (Johnson *et al.*, 1997:21-3; Velasquez, 1998:181).

Other Influences

Besides the above group characteristics (also called 'structural variables'), there are task variables, intermediate variables, dependent variables and environmental variables at work. Task variables refer to issues such as the nature of the task and the time required to handle it. Intermediate variables refer to group **motivation** (Drucker, 1995; Fukuyama, 1995 & 1999; Tricker, 2000), members' participation and **information sharing** (Damer, 1995; Wadeley, 1996; Johnson *et al.*, 1997:141). Dependent variables

refer to group **performance** (Buchanan *et al.*, 1997:210-74), **evaluation** of performance and **satisfaction** (*ibid.*). Environmental variables refer to members' shared **official responsibility** (*ibid.*), physical setting and interrelation with other groups (Janis, 1993; Johnson *et al.*, 1997:32-5).

In short, directors are subject to various personal, situational and relational influences that are connected with moral, economic and political considerations. Personal influences include self-esteem; sense of belonging or social approval; group expectations of leaders and task competence of its individual members, etc. (Schultz & Steiner in Shotter, 1993). Situational influences refer to the real or perceived pressure (**norms**) exerted by external groups when members' decisions will affect these groups. Members may have to compromise in view of such considerations as 'role expectation, political indebtedness, (and) antagonistic relationship(s)' with external groups.

The sum total of all these influences (ethics, beliefs, family ties, past obligations, mission, super-ordinate goals etc.), gives rise to a level of **cohesion** of the group, which acts to keep individuals within a group (Back in Gouran, 1982; Johnson *et al.*, 1997:113). Drucker (1992) finds that the greater the cohesion, the greater the members' commitment and readiness to sacrifice.

Corporate Governance

Corporate governance may be succinctly defined as 'the way public companies are run'. It is concerned with the exercise of power (and accountability according to Cadbury in Vinten, 1997) over corporate entities, ranging from small private enterprise to nonprofits (Tricker, 1992:1-8). Its focus is on the structure of governing bodies: the styles of their governing practices and processes; and the relationships within the governing bodies and with other stakeholders (Tricker, 1992:R.1.1; Neubauer *et al.* & Aykac *et al.* in Sutton, 1993; Carroll, 1996:594-603; Francis, 2000:10-3); the legitimacy of corporate **power;** corporate **accountability;** to whom and for what the corporation is **responsible**; and by what **standards** it is to be governed and by whom (Worthy & Neuschel in Sutton, 1993). It should be noted that governing bodies may not always be the epicentre of NPOs, as there may be other power centres or as the power may be dispersed.

Until recently, the prevailing analytical frameworks of corporate governance have been based on Agency and Stewardship Theories (AT & SST), with their emphasis on fiduciary duty to stockholders and the respective competing goals of conformance and performance (Tricker,

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1992 & 2000; Davis *et al.*, 1997; Vinten, 2000). From such perspectives, serving the interests of other immediate stakeholders has been considered largely irrelevant to, or even incompatible with, the objectives of both an organization and corporate governance, unless as an indirect means to achieve the business goals (Friedman/Sternberg in Vinten, 2000:36-42). Gul (1999) sees sound corporate governance as the cure to the pathology of the 1997 Asian Financial Crisis which, in his analysis, resulted from a lack of corporate transparency causing investors to lose their confidence in the business sector across Asia. He ascribes this 'pathology' to untruthful corporate financial reporting and disclosures, and to earnings manipulation. He prescribes the solution as one of making managers behave ethically, so as to regain and bolster investors' confidence to invest, by introducing governance mechanisms based on AT, such as quality auditors, independent NEDs and audit committees (Gul, 1999; R. Monks in Sutton, 1993; Vinten, 1994 & 1998). In my thesis, I shall argue that Stakeholder Theory (SHT, see p. 36) would be a better model for NPOs (Weiss, 1994; Tricker, 2000). Unlike AT, SHT is a heuristic or social contract model based on management ethics and the broader normative principles governing human behaviour (Weiss, 1994:181-3).

Agency Theory (AT)

AT can be traced to F. Knight's (1921*) controversial assumption of a pure agency relationship, based on over 200 years of economic research, casting man as a rational actor who seeks merely to maximize his utility (*in Bowie *et al.*, 1992; Sherden, 1997:115; Turnbull, 1999:188;). Subsequently, articles written by Coase (1930s*), Alchian & Demsetz (1972*), and Ross and Mitnick (1973 & 1993:8 & 95) culminated in Jensen & Meckling's (1976) well-known 'Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure' (* all in Bowie *et al.*, 1992; Turnbull, 1997:188-9). Briefly, AT states that as agents, directors and managers will take decisions that will maximize their own personal utility; consequently checks-and-balances are desirable to shareholders who are principals (Jensen *et al.*, 1976; Steidlmeier, 1992:170; Tricker, 1992 & 2000: 295; Mitnick, 1993:2, 8, 14 & 95; Vinten, 2000).

It should be pointed out that in contradiction to the core assumption of AT; with very large modern corporations, the separation of ownership and control is enabled by the philosophical assumption that man is essentially 'collectivist, pro-organizational and trustworthy' (Tricker, 1992; Davis *et al.*, 1997). In contrast, AT assumes that all agents are potentially

scheming opportunists, self-interest seeking with guile (Turnbull, 1997:190; Dees in HBR, 1999). In the absence of good governance, this latter assumption in AT may possibly influence managers to act in a self-fulfilling way (Drucker, 1989:24; Muth *et al.*, 1998:5; Burton, 2000:200).

In my opinion, the deterministic, economist mechanism of AT may not encompass all relevant features of good governance, such as full and fair disclosure and a code of ethics; and may especially be neglectful of ethical issues, e.g. individuals' rights and obligations, social responsibility, a value system that we want our society to share. Despite these fundamental objections to AT, authors such as G. Miller* insist that AT is compatible with ethics, because self-interest may not be inconsistent with public interest (Dees *et al.**, Mitnick*, Newton*, Miller*, Koford* and Penno*; Mitnick, 1993:51; Velasquez, 1999). Arrow* (* all in Bowie *et al.*, 1992) advocates that AT must be used critically, together with alternative models that assume a cooperative rather than a competitive nature of the principal-agent relationship (Bunker, 1995; Burton, 2000:200). (See also 'Recent Developments in Governance', p. 207) Bowie *et al.** warn that external control such as the checks-and-balances mechanism

recommended by AT can only be effective if such measures have the approval of the controlled.

Stewardship Theory (SST)

A popular view among psychologists/sociologists is the earlier and more normative approach of SST (Donaldson & Davis, 1994; Muth *et al.*, 1998:5-6; CG, 1999:81). Like agents, stewards are self-serving; but unlike agents, they achieve long-term self-survival and growth through cooperative behaviour, their principals' satisfaction and other more humanistic means (Bernard, 1938:259-60; Turnbull, 1997:189-90; Davis *et al.*, 1997:21; Muth *et al.*; 1998:5-6). Through working towards organizational goals; not only are stewards' needs met, but their gain is often higher than that can be attained through individualistic self-serving behaviour (Mitnick, 1993:1; Donaldson *et al.*, 1995:65-91; Turnbull, 1997:189). The Behavioral School hypothesizes that if managers are assured of the owners' trust in them, they tend to choose the steward's role (Katz & Kahn, 1978, Turner, 1981, Mowday *et al.*, 1982 all in Donaldson *et al.*; Drucker, 1990 &1994). In other words, how agents behave depends on the risks of executive opportunism that the owners wish to assume.

SST therefore assumes long term rationality; it fulfils the stewards' own

physiological and social needs. Its proponents advocate facilitation, empowerment and autonomy rather than monitoring and control in order to unleash executive directors' creativity and calculated risk-taking (Vinten, 1998). Therefore, they contend that governance structures should give stewards high authority and discretion, a situation that AT would guard against (Donaldson *et al.*, 1994; Tricker, 2000:291).

Corporate America and its Moral Limitations

The mainstream approach to corporate governance appears to be a combination of AT and SST in the USA. Accordingly, directors' primary aims are to bring shareholders substantial dividends, and to award managers with high salaries and bonuses. The driving forces are competition, and continuous growth and prosperity (HKEJD, 28.2.2002:editorial). The checks and balances are the various appointment, remuneration, internal and external audit committees. This system, plus innovation in technology and management, provides the critical success factors conducive to the very high productivity in the USA. In general, the management is mandated with almost absolute power in increasing efficiency and effectiveness. This system also gives rise to a more flexible and competitive labour market. Consequently, the characteristics of the

corporate America model of governance in the past decades are a relatively short period of recession after a very long term of prosperity, and a relatively speedy recovery rate from recession when compared with other OECD countries (*ibid.*). In contrast, in Europe including UK and in many Asian countries, corporate governance also emphasizes equity, harmony and social security. Therefore, organizations may not be so efficient and effective as their American counterparts because managers usually exercise their power with more restraint. They may be more reluctant to dismiss their staff; as a result, their operation costs may be higher and productivity lower (*ibid*).

Despite its apparent superiority in terms of economic performance, corporate governance in the USA has been suffering a decline in reputation since the '50s (Kendal *et al.*, 1998:xv). Admittedly, many companies still have made an effort to be socially responsible; yet there are also widely publicized cases of large-scale abuse of power (*ibid.*). The decay of professionalism and codes of ethics is said to have intensified in the 1990s. Recently, large corporations such as Enron, Global Crossing, Tyco International, WorldCom, Adelphia Communications, Computer Associates, Dynegy, ImClone Systems, Qwest Communications, and

Xerox have been implicated. None of these scandals was committed by the CEOs and directors alone; they all had allegedly had professional assistance. It appears that the three lines of defence have become ineffectual:

1 directors' remuneration committee and audit committee

2. independent Auditors,

3. other watchdogs such as securities analysts, investment bankers, lawyers and the press (AWSJ, 10.6.2002:A5).

In such cases, professionals who were supposed to see that rules and laws are obeyed and that executives are honest, have greatly compromised their principles, possibly because they assumed that they could reap tremendous gains by deferring to management. In many of the cases, even the regulators' roles were called into question (*ibid.*).

Greenspan and other optimists have referred to the moral decay as 'irrational exuberance'. He says, not that the greediness of human beings increased in the 1990s, but that what has increased is the number of opportunities to satisfy that greed. Indeed in 2001, the US Securities and Exchange Commission has opened 570 investigations, but the number represents only one in every 100 publicly traded companies. So

Greenspan argues that we should not generalize from a very small number to all the companies out there. Some pessimists disagree and speculate that probably a majority of directors are doing it, and that those directors who get themselves into trouble are those who go too far out on the edge and fall off (*ibid.*).

Kendal *et al.* (1998:xi) therefore argue that good corporate governance should consist of two essential elements:

1. a long-term relationship that deals with checks and balances, incentives for managers (see also HKEJD, 2.7.2002:23), and communications between management and directors; and
2. a transactional relationship that deals with disclosure and authority to ensure accountability and responsibility.

Now that the US government has endorsed major changes in accounting regulations through a legislative package (AWSJ, 26-28.7.2002), this represents a further attempt to redress ineffective governance through public regulation and reform (HKEJD, 22.6.2002).

Against this, I take the view that any set of standards for good corporate governance (such as those promulgated by Cadbury, Greenbury and the Hampel Committees that investigated the practice of corporate

governance in UK, made recommendations on the reform, monitored and reviewed the implementation processes and modified the recommendations made in the Cadbury Report, see reference at appendix) should aim to improve not only the company's efficiency and effectiveness, but also its social responsibility (HKEJD, 22.6.2002). That would entail bringing directors closer to all stakeholders by consulting and involving them, especially the three key stakeholder groups of customers, shareholders and staff, in the formulation of the company's strategy (*ibid.*, 1998:xvi, 18 &30-2).

For the capitalist system to be successful, good corporate governance cannot rely on extensive and expensive independent monitoring procedures alone, as these can be manipulated by CEOs and professionals alike (HKEJD, 17.6.2002:22 & 2.7.2002:23); so there must be a fundamental ethical basis, such as a virtue or duty-based ethical paradigm, for sufficient transparency (HKEJD, 17.6. 2002:22 & 22.6.2002:1). If the basis of either the regulatory machinery or the normative belief system is eroded, then the capitalist system will be in real trouble (AWSJ, 10.6.2002:A5). Therefore, Kendal *et al.* (1998:31) and many scholars recommend the Stakeholder approach because the model sets out to

incorporate the normative aims and values behind good governance and is believed to be more effective than any body of law or regulations alone. Professor Clark, when he commented on the US Government, argued that ethics was remarkably absent, not economics, in the American corporate culture.

Managerialism

Berle & Means (1933 in Jensen *et al.*, 1976 & DesJardins *et al.*, 2000:84-6) first used the term 'managerialism' (MNG) to describe the separation of control and ownership in the 'modern corporations' that are owned by large institutions and control the majority of wealth and resources (*Mingpao,* 7.6.1999:B11). In this thesis, MNG is defined as 'the operation of public or nonprofit sector on principles of the School of Scientific Management'. In its new form, MNG can be traced to the US civil service reforms under Carter's presidency. Later, UK, Australia and N. Zealand adopted it in response to business challenges and market demand (*ibid.*). From the MNG perspectives, an organization is judged by its profitability, competitive market position, customer satisfaction and ability to respond to changing needs (Rogers, 1998).

Brinckerhoff (1994:18) advocates business-like NPOs in order to

empower their boards financially. Similarly, Hung (1994) champions the Corporation Model to give directors more responsibility and power. Re-engineering and downsizing are deemed necessary to reduce overheads and increase income (Firstenberg, 1996:35-71; ECR7, 1997; Rose-Ackerman in Voluntas, v.1, n.1:13-25).

Criticisms of AT, SST and MNG

Critics contend that the economic model of man that underpins AT, SST and MNG is too simple and unrealistic a description of human behaviour (Jensen *et al.*, 1976), and that motivations are more complex than self-serving ends and extrinsic rewards. Buon and Nichols (in Weiss, 1994:76-7) contend that both AT and SST encourage corporations to become monopolistically Capitalists, and as industrial behemoths, a greater threat to our freedom. They argue further that if following AT and SST, companies would not conform to the free-market concept, but instead would exert a huge and growing influence by asserting corporate vested interests rather than serving the common good.

Both AT and SST fail also to explain the existence of some loosely coupled heterogeneous organizations, such as charities, schools and hospitals, whose objectives are for human change and betterment. It

should also be noted that AT, SST and MNG have not sufficiently embraced the concept of stakeholders and ethics that are key governance issues. Thus, they over-protect the self-interests of owners and the managers, often at other stakeholders' expense (Fox, 1985).

Opponents of MNG in NPOs argue also that managerial concepts will drive out other values and impose unhealthy competition among staff; leading to cutting corners, the growth of a blame culture, cynicism, stress, employees' survival mode, blind obedience, and the eventual loss of their trust, security, self-esteem, autonomy and loyalty in management (Mises, 1983; Jones, 1995). If that is so, poor quality and dissatisfied customers would ensue (Economist, 1996:107).

A more eclectic approach than AT, SST and MNG considers that the introduction of non-executive directors (NEDs) should help to reshape the nonprofit landscape, and reform the way competition is applied, in order to make NPOs more effective. On this view, the presence of NEDs alone, under the conditions examined in detail in my research, would ensure the board to balance common good and self-interest, be both mission- and market-driven, and embrace both pluralist and economic values (Rich in Powell, 1986:252; Mitnick, 1993:14, 20-3 & 61; Drucker, 1995:273-8;

Rogers, 1998; HBR, 1999:17). This eclectic approach to board structure invites debate on the convergence of governance in the three sectors (Mitnick, 1993:51; Vinten, 1997 & 2000; Cadbury, 2000:11-3).

NPOs in Hong Kong[2]

In Hong Kong, there are now some 1000 NPOs classified under public administration, education, health, etc. (see 'profile of respondents' in p. 231; Kramer in Voluntas, v.2.n1; Lam *et al.* in Voluntas, v.11, n.4). Within the Government and its subvented organizations alone, there are nearly 590 boards/committees with over 10,000 members. Only 65 of the boards/committees have paid NEDs. Such boards/committees were formed in the 1970s during a move to collect public opinion through consultation. By now, some of them have become statutory bodies or NPOs with legal and financial powers and their own *raison d'être* (e.g. hospitals, housing, railways), but their authority and responsibilities are still not very well defined (Vinten, 1997; Grindheim *et al.,* in Voluntas, v.1, n.1).

Some authors point out that the emergence of NPOs is intended to address 'social inequity' arising from market and government failures (Contract

[2] see also Appendix VII

Failure Theory in Hayes, 1996:19-20). Their *raison d'être* is therefore to provide public goods (the Public Goods Theory – *ibid.*) or basic human services and care mainly to those selected or under-privileged groups, who otherwise cannot afford some of the essential or similar services provided by the private sector (*ibid.*; Drucker, 1995; Osborne, 1996:22). It would follow from that position, that their directors should adopt the more communitarian approach of persuasion or voluntarism (Powell, 1986:251; Smith *et al.*, 1988; Steidlmeier, 1992; Tam, 1997; Scott in Galaskiewicz *et al.*, 1998:30).

The Reforms

In the early eighties, when the Hong Kong Government started their 'reforms' to downsize the public sector, they were attempting to meet increasing demand through improved performance and autonomy by privatizing some of the government departments and converting others into NPOs (Kuti in Voluntas, v.1, n.1; Kramer in Voluntas, v.1, n.2). After 1997, the Government was particularly keen to provide better healthcare and more housing (HKEJD, 24.1.2000:6). To create the necessary checks-and-balances mechanism, NEDs from the business sector were

appointed, not only for their expertise but also for their sense of social responsibility (Mises, 1983).

The appointment of NEDs to NPOs might have fulfilled the purpose of applying checks-and-balances to the otherwise unrestrained EDs' powers (Cadbury, 1993 & 2000; Vinten, 1997 & 2000). NEDs' presence might have also prompted EDs to be better prepared at board meetings (barring the effect of group dynamics, groupthink and polarization). However, some NEDs could not help seeing themselves as pawns and EDs as opportunists and politicians (McNulty *et al.*, 1996; Powell, 1986:251); particularly if NEDs had little access to timely and accurate **information**, or wielded little **power** and influence, or had little **intrinsic incentive** to serve (Getz in Mitnick, 1993: 250-3; HKEJD, 30.10.1999:A14).

Increasingly in Hong Kong, NEDs with a stronger sense of social responsibility demand to discuss a wider scope of policy and non-policy issues, share more information and get stronger secretarial support to provide independent background information (Morris, 1993; SQW, 1996; SCMPb & c, 1998; Poon, 1998). Despite this, the government's wish to retain full control is evidenced by its clinging to the appointment system that allows it to remove any NEDs who do not conform to government

policies, before or after the handover of Hong Kong to China (Choi, 1998; Ho, 1998). Such a non-elective, bureaucratic system remains dominant in NPOs where policy-making, implementation and monitoring are hierarchical, process-oriented and inflexible (Grindheim *et al.* in Voluntas, v.1, n.1). Boards tend to place greater emphasis on policy enforcement without adequate persuasion, flexibility, consensus building or partnership to convince stakeholders of their benefits. Boards are also less inclined to start any reforms top-down. They target inertia elsewhere, but seldom their own malpractice. Nor do they welcome criticism from the staff, the public and the media whom they see as hypercritical and passive-aggressive, passing the responsibility of solving problems back to NPOs (HKEJD, 1992). Other NPOs too have not democratized the appointment systems, nor have they evaluated members' performance systematically or opened their meetings to the public (Chu, 1998; Wu, 1998).

Without sufficient stakeholders' participation, the government-wide reforms seem to have caused public anxiety and frustration, a more divisive society and tension among board members and between boards/staffs (Mingpao, 21.1.2000:26). For example, the employees'

associations have condemned the government's Enhanced Productivity Programme, EPP, to drive subvented bodies to do more and better with less (SCMP, 7.2.2000:12). To them, EPP is tantamount to the continued exploitation and self-sacrifice of front-line staff.

Strategies from managerial perspectives tend to over-emphasize cost cutting and follow the path of the least resistance – usually focusing cuts on unorganized staff members (Chu, 1996; C. Chan, 1998). When staff suffer, they may consciously or unconsciously pass their discontent on to customers and performance deteriorates (Mises, 1983; Kwok, 1993; Wright *et al.*, 1996; SCMPa, 1997; Eadie, 1998; Roger, 1998:17-20).

However, many NPOs' structures still resemble the higher education circle in the 1960s, where the administrative arm (the governing bodies) 'consulted' the faculty arm (executive), a major stakeholder group, that controlled the curriculum, about any administrative policies or decisions. This governance model appears to be more akin to SHT than to AT. There are two important concepts in this model: collective control and open conflict resolution. Advocates of AT favour MNG and (paying) user control, while proponents of SHT believe more in dialogue and interaction among the diverse stakeholder groups (Krashinsky in

Voluntas, v.8, n.2). SHT advocates recognize that the various motivational forces in the wider (i.e. than AT or SST) environment and that the rationalizations behind them will interact according to some rules of circular causation as in 'Game Theory' (Francis, 2000:76-7).

When Drucker (1992:203) studied NPOs in the USA, he commented that some NPOs were becoming management leaders in two areas: strategy and the effectiveness of the board. The most crucial factor, he noted, was the knowledge workers' **internal motivation** and commitment to productivity management. He first wrote about the concepts of vision and mission statements, goal setting, result orientation and the upside-down hierarchy in NPOs and advocated their use in the business sector (*ibid.*:205). He also observed that NPOs prided themselves on their freedom from managerialism (*ibid.*:204).

According to Drucker, boards need to be realistic about human weaknesses because conflict of interest is inevitable. Directors should, for example, take the lead in reforming themselves first through relaxing bureaucratic control over professionals and establishing a relationship of mutual trust; developing a genuine partnership with the various stakeholders; and focusing on the human side of reform (*ibid.*).

Management Ethics, ME

In recent years, many academics have begun to believe that ME is an internal part of employees' sense of wellbeing and is psychologically integrated with their accomplishments (Malachowski, 1990; Weiss, 1994). Normative ethicists believe that managers need to engage in more critical ethical reasoning ('wisdom' to Socrates) to find out the correct moral paths for their organizations amid competing interests and uncertainty. The normative theorists believe also that managers should be more sensitive to the ethical implications of business decisions and practices, and be socially responsible for the problems directly caused by their own business activities: e.g. environmental pollution, industrial/product safety, bribery, consumers' rights, foreign investment policies, mistreatment of employees and financial deception (Wright, 1988; Weiss, 1994).

The recent adoption of SHT in both public policy and management frameworks in the USA and UK embraces the concept of protection of innocent third parties (Vinten, 1997 & 2000). Under SHT, the corporation becomes the nexus of a cluster of interests. According to SHT, the stakeholders grant authority to an elite group of people (agents) to further

organizational goals and maintain the integrity of political and economic systems by subsuming their own (agents') interests under corporate goals. From this perspective, the objective of governance mechanisms is to improve collaboration among groups, and to minimize sub-optimization and adverse effects on our environment (Weiss, 1994).

Stakeholder Theory (SHT)

The term 'stakeholder' first appeared in 1963 (Cohen, 1984:31-2; Metcalfe, 1998:30). It refers to individuals, corporations, groups or societal institutions that have a (moral) stake in or claim on the firm; that benefit from or are harmed by and whose rights are violated or respected by corporate actions (Freeman, 1984; Evan *et al.*, 1993; Weiss, 1994:9). The generic term includes internal stakeholders such as shareholders, management and staff; and external stakeholders such as customers, competitors, local community organizations, governments, suppliers, environmentalists, special interest groups, unions, media and future generations (Cohen, 1984:4; Carroll, 1996:74; Vinten, 2000).

Thus, the scope of SHT requires multiple perspectives, rather than just the customary economic and legal ones that dominate decision-making (Velasquez, 1992; Steidlmeier, 1992:170-2; Weiss, 1994; Polonsky *et al.*,

1997:1-27; Vinten, 2000). Proponents of SHT argue that managerial decisions should be made based on ethical principles, notably justice, human rights and wellbeing, as well as on pragmatic business goals. They contend that SHT is the best governance model, as it equates the purpose of an organization to the co-ordination and maximization of stakeholder interests and welfare, subject to legal, moral or social constraints. SHT does not prioritize the interests of any one particular group (Mitnick, 1993); rather, it cautions that when the competing interests are unbalanced, the firm's survival will be in jeopardy (Weiss, 1994).

Some authors (e.g. Mitnick, 1993 and Vinten, 2000) point out that SHT borrows ideas from a wider scope of study: philosophy, psychology - especially developmental and social psychology, and sociology (see also Brinckerhoff, 1994:133; Nanus *et al.*, 1999:220-3). Notwithstanding this, the significance of SHT has been increasingly recognized by organizations (Weiss, 1994). NPOs such as the Business Roundtable (1988) endorse the values of stakeholder participation in governance in the belief that an NPO can only be organic and adapt quickly to outside changes when management, staff, customers and other key stakeholders are 'owners' of that organization. The moral principles and behaviour of

the directors towards stakeholders are seen to be correlated and influenced by their internal motivations for justice, fairness, rights, freedom and equality (Osborne, 1996:19) (hence my HO1-07 in pp. 90-101). Tricker (2000) therefore refers to SHT as 'corporate governance philosophy', in that it has concern for ethics and values.

Criticisms of the Stakeholder Approach

Critics of SHT, such as Friedman (1970:137) regard the discussion of social responsibility in governance as loose and lacking rigor. They argue that such a doctrine involves the socialist view that political mechanisms, not **market** mechanisms, are the appropriate way to determine the allocation of scarce resources to alternative uses (*ibid.*; Snell, 1996:3). Friedman believes that in a free market, any cooperation is voluntary and hence all parties benefit from corporation (Carroll, 1996:42). Sternberg (1997) also asserts that SHT is incompatible with the objectives of organizations and corporate governance (Vinten, 2000). Other critics of SHT point out that the specific stakeholder groups are hard to identify (Freeman in Cohen, 1984:54; CG, 4.1999:137). Sternberg (1997) in particular queries this identification on the basis of the infringement of private property rights.

But Mulligan (1986) and Vinten (2000) consider such objections flawed, with inaccuracy in terms of the assumption that social responsibility must mean neglect of financial performance. Their rebuttal argument is that any conscientious directors ought to relate economic values to the larger human values of social justice and harmony in the human community. In other words, directors should take a more morally proactive approach by focusing on human fulfillment even through economic activities (Francis, 2000:14-9).

However, SHT, if taken to the extreme, can become counter-productive (Kalms in Hutton, 1997:245). It has therefore been criticized for over-stressing the importance of resolving conflict on the basis of need and for ignoring some other views such as equity, merit, contribution, demand and supply factors (Krashinsky in Voluntas, v.8, n.8). Another unresolved issue is that SHT cannot help managers to prioritize or choose between the stakeholder groups in an equitable manner; especially when the decision is going to benefit one group at the expense of another. Donaldson (1989) cautions that participative schemes such as SHT can lead to moral manipulation by opportunists. Collaboration, too, could be something other than team-based because of hierarchical structure and

stiff competition for advancement. Powerbrokers can exploit the emotive language of ethics to convince followers by appealing to vaguely defined terms such as commitment, loyalty and empowerment (CG, 4.1999:141). There is an interesting parallel of manipulation between the 'Corporate Social Responsibility' of SHT (Carroll, 1996:26-67) and the Confucian 'benevolent paternalism' that the Chinese communists have attacked. SHT can also enable a 'pragmatist' at lower moral stages to exploit it to locate the power centre, his/her possible supporters and opponents, and manipulate them to his/her selfish advantages (*ibid.*; Weiss, 1994:79-80).

The Concept of Stakeholder and Social Responsibility

Notwithstanding these potential traps, if applied in good faith as a tool for analysis, the SHT framework can lead an 'ethical idealist' at stage 6 of the Kohlbergian Model to arrive at a well-informed, well-argued, realistic and responsible decision. The emphasis of the SHT framework is on the corporation's social and ethical responsibilities. According to some scholars, such responsibilities to stakeholder groups are increasingly important considerations in issues that governing bodies face (Carroll, 1996:ix).

For example, Weiss (1994:31) argues that corporations may begin with

economic issues but should also consider the dimension of ethics and social responsibility, when 'questions of human and social costs and benefits, equity and justice' will be raised. Keith Davis (in *ibid.*:95) provides five guidelines for organizations to follow in order to be socially responsible, and to create and review the moral foundation of corporate stakeholder relationships. The five guidelines are:

1. business has a social role of trustee for society's resources
2. business shall operate as a two-way open system with open receipt of inputs from society and open disclosure of its operations to the public.
3. Social costs as well as benefits of an activity, product or service shall be thoroughly calculated and considered in order to decide whether to proceed with it.
4. The social costs of each activity, product or service shall be priced into it so that the consumer (user) pays for the effects of his consumption on society.
5. Business institutions as citizens have responsibilities for social involvement in areas of their competence where major social needs exist.' (*ibid.*)

Raymond Bauer (in Carroll 1996:30-40) defines 'corporate social

responsibility' as 'seriously considering the impact of the company's actions on society'. Another definition is 'social responsibility requires the individual to consider his/her acts in terms of a whole social system, and holds him/her responsible for the effects of his/her acts anywhere in that system'. Carroll points out that stakeholders actually constitute the most important elements of that broad grouping known as society (Carroll 1996:23-4).

In Carroll's four- part model, Corporate Social Responsibility includes economic, legal, ethical and philanthropic responsibilities to the various stakeholder groups. Carroll considers the model to be essentially a stakeholder model (Carroll 1996:33-40). In the model, each component addresses different stakeholders in terms of the varying priorities in which the stakeholders are affected, as in Fig.1.1a below. This model provides some guidance to corporate social responsibility in addition to the fiduciary duties to the shareholders emphasized in AT and SST. It helps the directors to evaluate their own and one another's performance.

SHT perspective argues that the 'corporation has social and moral obligations towards their stakeholders in order to maintain and benefit from mutually sustaining relationships (Weiss, 94:29-31)'. It is therefore

the 'most practical, least absolutist conceptual framework' to examine directors' social and ethical responsibility (Weiss, 1994:29-31; Carroll, 1996:ix).

Fig. 1.1a Stakeholder View of Social Responsibility

Social Responsibility Components	Stakeholder Group Addressed and Affected				
	Owner	Consumer	Employee	Community	Others
Economic	1	4	2	3	5
Legal	3	2	1	4	5
Ethical	4	1	2	3	5
Philanthropic	3	4	2	1	5

1- highest and 5- lowest priority Source: Carroll, 1996:41

Governance and Performance

Corporate performance is often measured by profitability, growth, productivity, competitive market position, and ability to respond to changing needs (Mises, 1983; Turner in Buchanan, 1997; Rogers, 1998:17 -20). Reliance upon a handful of financial indicators alone may be misleading. First, they may not be complex enough to reflect the rapidly changing world. Secondly, even financial performance of the

whole organization may be affected by many factors other than governance: e.g. strategies, corporate culture, leadership, organization, incentive schemes, sentiments and interactions, let alone other non-financial performance. Lastly, as people's response to imposed policies is unpredictable and often dysfunctional, designers of performance assessment systems must allow for the human dimension (Turner in Buchanan *et al.*, 1997; see p. 17 on the discussion on 'epicentre').

Other more subtle indicators common to both the private and nonprofit sectors include economy and efficiency. Economy may be taken as maximized input for any given cost; and efficiency as the ratio of input/output or productivity (Osborne, 1996:254). Furthermore, financial performance cannot be sustained without non-financial underpinnings, e.g. innovation, product quality, customer satisfaction (M. Meyer in Dickson, 1997:486). Yet non-financial performance indicators, even if quantifiable, are seldom standardized (Useem in Dickson, 1997:487). Lastly, both types of statistics may be outdated when they become available. Therefore, continuous assessment, improvement, empowerment and other measures conducive to innovation and

productivity would have to be embraced.

Notwithstanding the difficulties and complexities of measuring output, researchers who base their assumptions on AT and firm-as-nexus of contracts (e.g. Williamson in Mitnick, 1993:100 & 109) have hypothesized that the board's performance has to do with group characteristics: viz. its size, composition, status difference, conflict, representativeness, leadership style, communication network, etc. (Lord Dearing in Baty, 1998). It is worth noting that most of these research studies do not find conclusive evidence for this hypothesis (Donaldson *et al.*, 1994; Tricker, 1999:117; Burton, 2000:198-201; Vinten, 2000). Researchers who use other competing theories have also not shown any positive correlation with these characteristics (Donaldson, 1989:71).

As regards SHT, Velasquez (1998:39-40) identifies some of the difficulties in correlating ethics and financial performance. In contrast with free market ideology, Stakeholder Theorists subscribe to symbiotic shared values and focus on strong ethical codes of a society as the glue of social stability and key to economic success. To them, it is logically clear that by and large SHT does not detract from but contributes to productivity and profits (Weiss, 1994; Velasquez, 1998:40). Thus, Jones

(1995:422-3) contends that all things being equal, firms using ethical solutions (e.g. mutual trust and cooperation) rather than just control mechanisms to curb opportunism will perform better. Others argue that even if SHT turns out to be less efficacious than other conceptions, it is the moral consequences that are at issue, because it is the '*sine quo non* of business virtue' (O'Toole in Donaldson *et al.*, 1995:18-9).

Some Further Concluding Remarks on SHT

The body of research literature presented here is intended to support my hypotheses that a multi-disciplinary approach is necessary for the study of governance. It has been argued that all organizations in the private, public and nonprofit sectors are created to meet the diverse needs of a community – notably economic, political and social. I therefore suggest that SHT should complement AT and SST so that socio-economic issues will be properly addressed. In the same vein, Sir Adrian Cadbury has said that a simple governance model could not be designed to cope with today's new challenges. While emphasizing the need for external control and regulations, he has argued cogently that the duty of the board is (also) to 'distill and instill the values held in common by workers (Cadbury, 1992 & 2000)'.

On the one hand, SHT acknowledges diversity of interests and looks after them, by restricting unethical behaviour of the directors as well as among staff; because if the boards tend to ignore stakeholders, then factional misbehaviour to protect their own interests may proliferate. On the other hand, SHT not only emphasizes the need for profits for owners but also responds to needs, rights and legitimate demands from stakeholders (Evan and Freeman in Weiss, 1994:29; Vinten, 2000). In its pursuit to create win-win situations for all parties (Hutton, 1997:245), SHT invokes both deontological and utilitarian principles. To fulfill their declared mission (usually utilitarian in nature), managers are required to map stakeholder relationships and coalitions, assess their interests and power, construct a matrix of stakeholder moral responsibilities (deontological in nature), develop specific strategies and tactics, and monitor shifting coalitions (Frederick in Weiss, 1994:242-4). According to SHT, managers' analysis of their strategies or policies should begin with economic, political or ecological (utilitarian) aspects and evolve into social responsibility and ethical decision making (deontological). SHT thus encompasses human and social costs and benefits, and equity and justice.

Regarding the convergence of SHT with managerialist perspectives,

Hosmer observes that ethical principles based on SHT have already come level with other business subjects in USA: viz. quantitative models in functional management, information technology and strategy planning (Weiss, 1994:5). Fortune (3.1999:42-3) has listed social responsibility as one of the eight key attributes of reputations (the others being innovativeness, quality of management, employee talent, quality of product/services, long term investment value, financial soundness and use of corporate assets). SHT is now a popular paradigm among reputed management consultants to formulate policies on directors' fiduciary duties, mergers and acquisitions, and public pension funds investment (Sternberg, 1997). The USA uses SHT as the basis for preparing the legislative bills in 29 states. In the UK, the 1973 Watkinson Report (*ibid.*) endorses SHT in defining the responsibilities of publicly listed companies, and the Confederation of the British Industry and Trade Union Congress, representing the employers and employees, proposed to adopt it in business laws (*ibid.*). The British Labour Party used it as one of its defining themes in the general election campaigns in May 1997 and June 2001, and won convincingly.

Research in Social Sciences

I will argue that the research method I have adopted is suitable for the

topic of governance ethics in Social Sciences (see Chapters III & IV). Social life is defined by Ragin (1994) succinctly as 'people doing or refusing to do things together'. It involves individuals' preference and interaction, and is arguably more complicated than natural phenomena. As such complexity may lead to various interpretations, Ragin recommends research strategy different from that in natural sciences, i.e. strategy based on phenomenology rather than on positivism (*ibid.*).

Scientific Approach

Positivism is the mainstream research strategy in the USA (Gummesson, 1991) and possibly in the Asian region. Proponents believe that positivism defines the essence of the scientific method and governs all forms of knowledge generation, including natural and social sciences (Durkheim in Hayes, 1996:118; Bryman, 1988; Nachmias *et al.*, 1997:3-10). 'Hard-line' positivists aim at 'prediction and control' and contend that the main purpose of any social research study is to establish 'causal relations' between variables. They also argue that any concepts that cannot be precisely measured through specific procedures do not have a place in scientific inquiry. Consequently, the conventional positivist approach is to make hypotheses that involve dependent and independent variables; and

test these hypotheses using statistical tools (Taylor and Bogdan in Hayes, 1996:118). Furthermore, according to positivists, normative values are incompatible with scientific objectivity; therefore scientific research cannot investigate values (*ibid.*).

Criticisms of Positivism

Campbell *et al.* (1963) comment that scientific methods can be incompetent, tedious, equivocal, doubtful, of undependable repetition or even useless. They warn that statistical manipulation of experimental data does not help poor research design. Another limitation is that the development of a model is bounded by preconceived theory (Patton in Hayes, 1996:123). Dubin (1978:193-7) argues that most of the data in social sciences are only relative indicators, not absolute indicators. Furthermore, some of the crucial variables that contribute significantly to an outcome may have been left out of a positivist model, and the omission may affect the understanding of a certain aspect of the system (see the discussion of Cronbach's alpha, p. 177 & p. 181). Lastly, the deliberate over-simplification to make the model more easily understandable means that precise prediction may not be possible, and may also be limited in both time and context (Hayes, 1996:123). Therefore, a broad model

focusing on the directionality of relationship is more useful than one aiming at precise prediction (Buchanan *et al.* 1997:30). All these considerations are duly taken into account in phenomenology and in canonical correlation analysis (Deutscher in Hayes, 1996:118; see also pp. 58 & 144).

Other critics argue that the tenets of positivism can hardly be required in the social sciences because researchers often use rhetorical devices, such as analogies and metaphors, to aid their understanding of phenomena. In addition, as the investigators' worldviews change with time, so do their interpretations of what is observed. There is also no escape from values in social sciences. Lastly, even if we confirm our hypotheses, as in the case of AT, we may have overlooked other arguably more reasonable hypotheses which fit the same facts, such as SHT, or our theory may contain assumptions that have no bearing on the facts (Bryman, 1988).

There is also the danger in positivism that as most structured quantitative analyses are susceptible to foregone conclusions, it may often lead to undue claim of causal relations (Layder, 1993; see also Merton's Middle-Range Theory in Ragin, 1994). At present, there are scarcely any safeguards to prevent model builders and users from the intentional,

unintentional or reckless manipulation of theories to accomplish their own potentially selfish ends. Perhaps more importantly, those applying a theory may not be fully aware of or understand that enormous harm can be caused, if the values and assumptions on which a theory is based or if stakeholder groups affected are not taken into serious consideration. The researchers and practitioners need to follow a professional code of ethics to guide them so as not to cause harm to their subjects, the community and themselves. In my case, I have adhered to ethical behaviour in the conduct of my research and, upon reflection, am satisfied that the adoption of my theory and model will be to the betterment of humanity.

Causation

Another major problem with positivism is that in many social research studies, unequivocal causation cannot be as readily established as in physical sciences, even with one dependent and one or several independent variables, let alone two sets of multiple variables in multivariate analysis (Gummesson, 1991). Labovits *et al.* (1971) attribute the complexity of social sciences to the following causes: multiple causation, additive causation, interactive causation, threshold effect and the feedback principle.

Some scholars (Dubin, 1978:26; Sherden, 1997) point out that non-linear and complex relationships in social sciences may magnify errors in our initial assumptions. Still others believe that in social sciences, there will be laws of interaction besides those of causality (Dubin, 1978:89–91). This means that the operation of the variables X and Y in the form of ($Y = a + bX + cX^2 \ldots + nX^n$) only shows linkages or connections (i.e. correlation) among the variables in the model, not necessarily a prediction (Dubin, 1978:26) (see also Chapter IV).

Canonical Correlation Analysis

Hotelling is accredited with the development of the logic of canonical correlation analysis, Cancorr (SAS or SPSS) in 1935. The process was fully explained by Cooley and Lohnes* (1962&1971) and later by Bentler and Huba* (1982) (*both in Bernstein *et al.*, 1988). It is a logical extension of multiple regression by having more than one dependent variable to the model (Kerlinger, 1986). The procedure consists of first finding out the respective correlation and redundancy between the two sets, and then deciding to what extent the changes in one set can be sufficiently accounted for by changes in the other set (Labovits *et al.*, 1971). The magnitudes of the canonical correlation coefficients in the

matrix of variables will reflect both the degree of association and multiple interaction effects (see also Chapter IV). Cancorr can also identify spurious determinants, and remove them by successive elimination (a process also possible with most multivariate techniques such as factor analysis, principal component, Cronbach's alpha). In this way, the theoretical model may be repeatedly improved. Baggaley (1981 in Levine, 1977:7-33) further observes that Cancorr is the most general case of all linear models, viz. multiple regression analysis, M/ANOVA, factor and discriminant analyses.

D. Ford (1990) of the International Marketing and Purchasing (IMP) Project Group of researchers first applied Cancorr and redundancy analyses to the IMP's Interaction Model. The Model included the interaction between human and institutional factors in behavioral studies, and the use of psychology to explain the apparent inconsistency in human behaviour. The IMP Project Group comprised academicians from France, Germany, Italy, Sweden and UK (Howard *et al.* 1973; Sheth, 1973 & 1977; Hakansson, 1982 & 1986) and had done extensive research in their own countries. In Hong Kong, Pang (1980) and Chiu (1992) also found Cancorr very useful in their research studies of human behaviour in

organizations. My own experience in interactionism and correlation analysis confirmed this. In 1992, I used Cancorr of SPSS to test hypotheses and found significant correlation among a large number of predictor and criterion sets (Cheng, 1992).

Positivists tend to view socially and organizationally constructed influences on behaviour as minimal and personality as constant. Some (such as B. F. Skinner) even claim that they can build systems to control human behavior. When positivists such as these apply multivariate analysis, they often hope to find by linear regression a formula showing the causal relationship between the dependent variable Y and the independent variables X^n by determining their coefficients (regression weights): a, b, c.... n, so that they can use the equation for prediction and control:

$$Y = a + bX + cX^2 \ldots\ldots n\,X^n$$

In contrast, phenomenologists believe in the force of people's subjective worlds, such as their aspirations and imagination, and in the influence of relationship dynamics with others. They emphasize the complexity and variability of individual behavior and argue that there are probably no specific behavioural outputs and explanations that can adequately be

represented by an equation. Phenomenologists therefore consider that the coefficients (regression weights) derived to maximize the correlation between the two composite sets cannot be used for precise prediction and control. They also doubt whether it is ethical to manipulate people's behavior (see also pp. 51-2).

Regardless of the differences between the positivist and phenomenological approaches, it should be stressed that scientific methods used in the social sciences must also aim at objectivity and encompass systematic exploration and generalization in order to make sense of the behavioral world around us (Buchanan et al., 1997:19). Although phenomenologists are critical of statistical methods, my view is that statistics may help to reduce some of the bias and error introduced during the early stage of data collection, so that at best 'data analysis as well as data collection is as exhaustive and rigorous as man is able to devise (*ibid.*:21)'.

One respectable approach for the development of scientific explanation is therefore to collect and then subject the data collected to multivariate analysis. This can then establish the degree of association or correlation between the different variables; although for the social scientists, such

statistical interrelationships do not necessarily imply a causal connection (*ibid.*)

Therefore, a phenomenological use of Cancor for behavioral study focuses on the **magnitude** of the Canonical Correlation Coefficient, R, which measures the (linear) correlation between the criterion composite

Fig. 1.1 Positivism versus phenomenology

	Quantitative	**Qualitative**
	Positivism/ behaviorist	phenomenology/ cognitive
Description	Study observable behaviour	study internal mental states, meanings and interpretations
Explanation	seek fixed universal laws governing behaviour	focus on individuals' understanding and interpretation of the world to explain behaviour
Prediction	based on knowledge of consistent relationship between variables	based on shared under-standing and awareness of multiple social and organizational realities
Control	Aim to shape behaviour by manipulating external variables	aim at social and organizational change through stimulating critical awareness

Source Buchanan *et al.* 1997:30

and the predictor composite sets (Recher, 1998:312; see also p. 149); and the cross-canonical loadings that reflect the direct contribution of each of the original variables in the set to the same composite set (see also p. 155).

This allows room, within associated conceptual models, to acknowledge the influences of local dynamics of meaning construction, within a broader envelope of objective or material determinants.

Indeed, in the study of organizational behaviour, the focus has shifted from positivism to phenomenology, or the understanding and awareness of multiple social and organizational variables, rather than the fixed universal laws governing human behaviour (Buchanan *et al.*, 1997:30). Thus, Cancorr, which does not depend on the more contentious assumptions of positivism discussed above, has been gaining popularity in the social sciences when correlation is measured (Aeker, 1971; Thorndike, 1978:175-202; Lunneborg *et al.*, 1983; Marascuilo, *et al.*, 1983; Dillon *et al.*, 1984; Bernstein *et al.*, 1988; Burg, 1988).

Theory Building

In contrast to theory testing and a once-and-for-all definitive project in positivism, theory building entails a process of evolution, of continuous multiple research studies. It needs 'replication' and 'cross validation' under similar conditions (Campbell *et al.*, 1963; Nachmias *et al.*, 1997). Theory builders argue that social phenomenon is not an 'either-or' (e.g. AT versus SHT), but a meshed 'both-and' scenario; therefore a research

study should be an on-going process towards the truth (Strauss *et al.*, 1990; Gummesson, 1991).

Qualitative Methods

Qualitative methods were first employed in social research in 1855 and became fully established in 1918 (Hayes, 1996:121). Later, quantitative methodology gained popularity in the USA. In the 1960s, qualitative methods regained wider acceptance when many scholars became disillusioned with positivism (Seidman, 1991).

The pros and cons of quantitative and qualitative methods have been substantially explored. In general, qualitative methods are used to clarify categories and concepts, examine in-depth cases, identify key features of cases and enhance images, e.g. its use in Grounded Theory. Quantitative methods focus on co-variation of features across many cases, and condense data on the relationship between two sets of variables – predictor & criterion - across many cases. For maximum potential, Layder (1993) argues that the researcher should use qualitative analysis and qualitative data as the central core to explore the 'virgin' aspects in the trial exploration, and quantitative analysis as complementary. Glasser & Strauss (1967 in Hayes, 1996:119) also recommend researchers to use

qualitative method for 'preliminary, exploratory and groundbreaking work for getting surveys started', and for discovering and building new theory; and quantitative methods to test unconfirmed theories with 'facts' (see Grounded Theory in Strauss & Corbin, 1990; Ragin, 1994).

Realist Theory

Both Middle-range Theory (MRT) and Grounded Theory (GT) pay scant attention to several major issues: viz. the macro-micro problems, the stratified nature of social life, the analysis of power, the historical dimension and the relation between general theory and research theory. Layder (1993) contends that it is often difficult to distinguish between qualitative and quantitative data. Even when there is a distinction, both types of data have important roles in theory building and testing in a complementary way and cannot be separated. It is therefore logical for them to be coordinated (*ibid.*).

Layder argues that Realist Theory, is a better alternative to either MRT or GT (*ibid.*). A realist is concerned with 'causality and the identification of causal mechanisms in social phenomena in a manner quite unlike the traditional positivist search for causal generalization'. It emphasizes additional major issues, but treats them only as co-operative components,

with no intention to replacing those issues in the two theories.

Layder (*ibid.*) draws our attention to the key features of social life, which have multiple levels and dimensions, so that we can develop an overall framework to relate our findings in terms of these essential elements to the more general issues in sociology. His idea was shared by Mitnick (1993) when the latter criticized AT in its original economic form.

Arguably, there are multiple levels of analysis of governance, ranging from the more macro at the political to the more micro at the organizational level. In order not to complicate my analysis, I have only addressed some of the common concepts. It may be contended that even at the micro organizational level, the issues faced by corporations and NPOs may be diverse and require various approaches. In particular, the issues in NPO governance as I see them would be the prevalent social value system (external motivations), company culture (norms) and power structure (power base) as are included in my hypotheses; whilst the micro issues would be the individuals' personalities (internal motivations), their own social experiences and peer group or family pressure (social norms).

CHAPTER II THEORY AND HYPOTHESIS

Overview

In building my theory, I do not begin with the assumption of the 'economic man' inherent in AT and SST, because to me human motivation is more complex than that (Sen in Chan, 2001). The oversimplified assumption of AT may have adversely affected directors' perception, understanding, decision and behaviour. I also question the efficacy of exclusive focus on fiduciary duties to shareholders to sustain long-term performance. I have instead adopted what may be considered an unorthodox approach based on SHT and on an ethical rather than a purely economic perspective (*ibid.*). My theory is expected to shift directors' focus to the facilitation of socially responsible outcomes.

My questionnaire therefore has been designed to ask for data pertinent to ethical issues and SHT, e.g. directors' internal and external motivations, stakeholder interests, and collective performance under the influence of group dynamics motivation (Buttram *et al.* in Bunker, 1995:xxix-xxx). The magnitudes of the canonical correlation coefficients among the

criterion and predictor sets will affirm or disprove the significance of my theory (pp.144 & 149).

The important determinants of socially responsible behaviour in NPO governance are construed to be directors' internal motivation (Duca, 1996:3-4), that I assume to be enhanced with the awareness of the various ethical principles theories (Duca, 1996:3-4 & 17; Kendal *et al.*; 1998: 157-70 & 285). In more concrete terms, these dependent variables are personal self-interest, benefits to his/her company and the NPO, operation efficiency, friendship, social responsibility, personal morality and professional codes (all are used as the incentive group of items in my questionnaire) (Kendal *et al.*; 1998:139-43; see also (1) in p. 81 below).

The independent variables are the external or organizational factors that will have influence on the directors' socially responsible behaviour (Kendal *et al.*, 1998:18, 125 &127-136; McDonald *et al*, 1999:134-6). Specifically, they are behavioral norms (Wilbur *et al.*, 1994:9 & 54) perceived directors' roles, responsibilities, power base, access to information, performance evaluation and incentive system (Miller, 1991:378-385; Wilbur *et al.*, 1994:54-8; Duca, 1996:19; Kendal et al., 1998:157-70; see also (2) in p. 82 below).

Effective Governance

Over the years, researchers in corporate governance hypothesize that a board's performance has to do with group characteristics: its size, composition, structure, status difference, conflict, representativeness, role, leadership style, group norms, cohesion, responsibility, communication network, etc. (Lord Dearing in Baty, 1998; Cadbury, 2000:12). Their findings so far have not led to any unchallenged conclusion (Mitnick, 1993:7; Turnbull, 1997:184; Burton, 2000:198; Dedman, 2000:133; Vinten, 2000). For instance, one research group concludes that higher performance is associated with independent board leadership. Yet another finds correlation between higher performance and stewardship-type executive-chaired boards. Still other groups cannot ascertain the ideal board composition and other attributes for effective performance (Chitayat, 1985; Cadbury, 1992; Vinten, 1997 & 2000; Burton, 2000); nor can they find any significant difference in performance between executive- and outsider-chaired boards, or in relation to other governance dimensions (Donaldson *et al.*, 1994; Tricker, 1999:117; Burton, 2000:198-201; Vinten, 2000).

Nonetheless, Firstenberg (1996:77-9 & 117-83; Osborne, 1996:217-21;

Nader in Weiss, 1994:122) and Brinckerhoff (1994:26 & 46-50) together prescribe a comprehensive list of factors for effective governance:

1. Selection of directors based on their experience, their knowledge about **stakeholders** and the community, their ability to deal with policy issues and meaningful tasks, and to act as checks-and-balances (Baty, 1998:6);

2. a vision and a well defined and understood mission and values capable of attainment. NPO needs to have clearly defined social service targets and **responsibility** to its customers and other stakeholders (Dunphy in Buchanan, 1997:491; HBR, 1999:54-72 & 90; Nanus *et al.*, 1999:104);

3. a clear process for discharging directors' **responsibilities**, such as an effective committee structure (McGregor in Buchanan *et al.*, 1997:268);

4. partnership between board and management (Fristenberg, 1996; HBR,1999:54-72);

5. a well-educated and highly motivated staff to support the board (Powell, 1986:252; Fristenberg, 1996; Baty, 1998:6);

6. clear **performance** indicators and regular **performance evaluation** of the board and for its effect on directors' tenure (Berger *et al.* in Powell, 1986:252; Brenner *et al.*, 1995; Firstenberg, 1996:177; McGregor in Buchanan *et al.*, 1997:268; Baty, 1998; HBR, 1999:54-72 & 80-9; Fortune, 17.4.2000:114); and

7. adoption of a **stakeholder approach** by fulfilling its obligations to stakeholders (Firstenberg, 1996:77; Hunter in Dickson, 1997; Buchanan *et al.*, 1997:8; Velasquez, 1998:39-40). This means that directors should be trained to be familiar with ethical theories and ethical issues, anticipate ethical problems, and implement governance/management ethics (Mitnick, 1993:17-8; Brinckerhoff, 1994:57-67; Osborne, 1996:18-9; Kanungo *et al.*, 1996:x; Buchanan *et al.*, 1997:268; Nolan in Baty, 1998:6; Cornforth *et al.*, 1999:359-60; Heracleous, 1999:284; Cadbury, 2000; Vinten, 2000:37 & 40).

The Theory

My theory is less concerned about board composition or the strictness of

external control; but rather focuses on directors as social humans and on the influences on their behaviour of their internal and external motivations. My theory can be stated as - 'the performance of nonprofit governing bodies is highly dependent on the interaction of the following three key groups of cognitive, behavioral and environmental determinants (Schultz & Steiner in Shotter, 1993; McDonald *et al.*, 1999:135; Sen in Chan, 2001):

a. **internal motivations** in terms of the ethical principles that the directors subscribe to, including the principles of rights and justice that influence their perception, personality, expectancies and behaviour;
b. **external motivations** as perceived by the directors including organizational, social and political influences: e.g. culture, policy, climate, ethical programmes, focus of performance; and
c. **social learning process** of how the directors' evaluate their performance and how their past experiences influence their decision making'.

My theory thus envisages the interaction of those internal and external motivations, some of which are utilitarian and others social and deontological in nature (Drucker, 1992:203-30; Parker, 1980 & Kohn

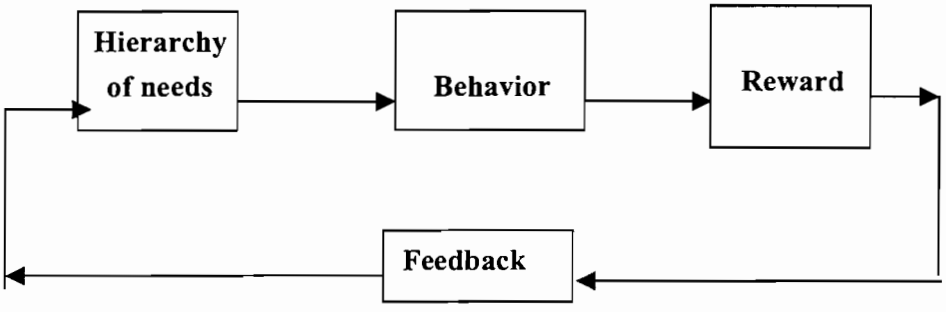
1993 in Bunker, 1995:240; Kohlberg, 1969, 1973, 1981 & 1984 in Gross, 1996:12-3 & 697-705; MDC, 1997:64). My model aims to provide a framework that enables directors to make orderly economic, social and ethical progress in theorizing nonprofit governance. This approach requires shared **information** on the stakeholder groups (values, needs, satisfactions and dissatisfactions), directors' awareness of and clarity about their **roles** and **motivations**, of organizational **norms**, of official **responsibilities**, and access to data that can inform reasonable **evaluation of their performance** (McDonald *et al.*, 1999:133-46). **Performance evaluation** refers not just to economic outcomes but also to the less tangible concepts such as social responsibility, teamwork and empowerment (Jackall, 1988; Snell, 1993; Frederick *et al.* in Weiss, 1994; Shaw *et al.*, 1995:32-3).

Motivation Theories

Central to my model and hypotheses is the concept of motivation in organizational behavioral studies (Mitnick, 1993:22, 34 & 112; Drucker, 1995; Bunker, 1995:18; Fukuyama, 1995 & 1999; Tricker, 2000; DesJardins *et al.*, 2000:25; Sen in Chan, 2001). While AT and SST just focus on the lower level of motivations for economic gains (Mele in Maclagan, 1990; Weiss, 1994; Kenyon, 1998:220-5), Maslow's

'Hierarchy of Needs' tops the apex of motivation with the self-actualization need of one's own potential and ideals (MDC, 1997:156-63). In their own ways and applying their own terminology, Herzberg and McClelland expound their 'Needs Theories' (*ibid.*; Handy, 1976:23-52; Burns, 1978; Hickman in Wren, 1996).

Fig. 2.1 Motivation



Source: MDC, 1997:153

In contrast to these 'content' or 'needs' theories, the 'process' theories try to establish the relationships between the decision-maker's values, cognition and behaviour. Examples are Vroom's or Alderfer's Expectancy Theory and Adams' Equity Theory, which go beyond individuals' needs and compare their perceived efforts and expected rewards with reality, and with others' efforts and rewards in the same group (MDC, 1997:163-8; McDonald *et al.*, 1999:134). Salancid *et al.* (1997) imply social learning when they contend that people's needs change over time or environment

through the feedback loop of assimilation and accommodation. Arguments similar to the 'Hierarchy of Needs' and social learning are used in Kohlberg's Model (p. 15 above; Kohlberg, 1969, 1973, 1981 & 1984 in Gross, 1996: 12-3 & 697-705; McDonald *et al.*, 1999:133).

In management, Drucker (1946) argued that a leader needed not be a genius, but must understand **motivation**. Much later, he identified some of these **motivations** as clearly defined **responsibility, accountability for performance** and **performance evaluation** (Drucker, 1992:203-30; see also MDC, 1997:64; Gay, 1999:231; Heracleous, 1999:281-2; Cadbury, 2000:11-2). Goleman (1998:99-100) argues that an organization will perform poorly if directors and employees do not agree on a congruent purpose and give their dedication. To him, the motivation or purpose may be utilitarian, social and/or ethical in the management of corporations.

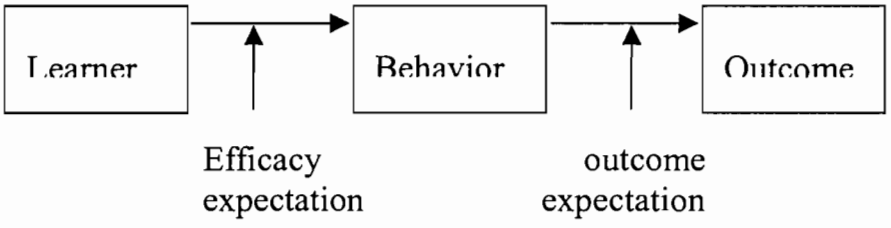
Fox (1985:15&23) however contends that human motivations and responses, and their relationship are more complex and subtler than those veritable laws in natural sciences – i.e. he is skeptical about positivism. He also doubts whether an agent will be able to understand even her/his own true motivations. Nonetheless, it appears that in additional to external motivations, directors in NPOs seem to have internal, higher level

motivations/incentives such as job satisfaction, socialization and moral persuasions (Bowie *et al.*, 1992; Rogers, 1998). This non-positivist subtlety can, I believe, be established using canonical correlation analysis.

Social Learning Theory (SLT)

SLT emphasizes the continuous reciprocal interaction 'among cognitive, behavioral, and environmental determinants in the learning process' (Bandura, 1976 in Batson, 1991; in Wilson, 1994 & in Gross, 1996:173 & 688-93). The learners, in this case the directors, will behave according to the values they place on the outcome of the internal satisfaction from

Fig. 2.2 Social Learning Model



Source: Bandura in Wilson, 1994

such behaviour, from successful accomplishment of goals and/or from the external rewards for such behaviour (*ibid.*). This theory also describes the continuous reciprocal interaction among cognitive, behavioral and environmental determinants in the learning process. It contends that

'learning can be [done] through response consequences (the intrinsic/extrinsic satisfaction and the extrinsic rewards) or observations of others who serve as models (*ibid.*)'.

Interactionism

Fig. 2.3 The Interaction Model

		Principal's choice	
		Agent	Steward
Manager's choice	Agent	mutual agency relationship	Principal is Betrayed
	Steward	manager is betrayed	mutual stewardship relationship

Source: Davis *et al.*., 1997:39

When Davis *et al.* (1997) explored AT and SST for their origins, basic assumptions and limitation; they developed a similar interactive model based on personality and situational characteristics (see also Mitnick, 1993:3 & 6; Harsanyi, 2000). In game-theoretic terms, the interactions among directors or stakeholders depend on the following three factors: the 'psychological characteristics' of each party in their relationships (i.e. **motivations**); the 'situational characteristics' (**other determinants**); and the expectation that each party has of the other (**norms**).

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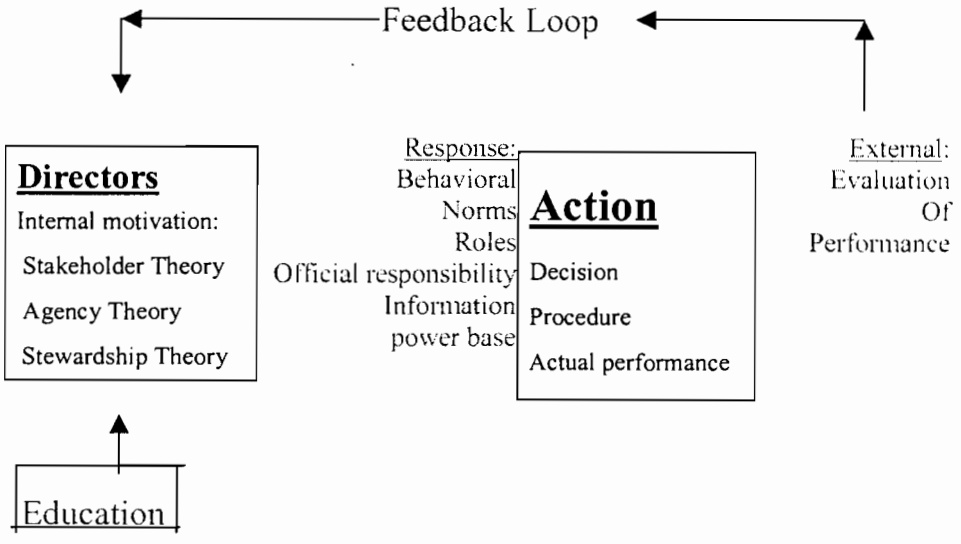
Modernism in Management

A large percentage of management literature advocates the modernist approach, which is constrained in legal, political and economic structure motivated by business survival (Chan, 2001); and AT falls into this category (Kenyon, 1998:220-5). Modernism is narrowly defined here as an approach in social sciences based on positivism (Smith 1986:15; Heidegger in Waugh, 1992:2; Boyne *et al.*, 1990:97). Scott (in Wright, 1988) summarizes the modernist thought as over-emphasizing the empiric and mythopoeic levels of reasoning; with their concepts of either positive.

Fig. 2.4 Ethical Reasoning Model with Feedback Based on Modernism



Source: the author, 4.1999

science, instrumentalism, or societal self-interpretation and objectivity. Empiric scholars aim to generate and disseminate information while mythopoeic ones aim to create and maintain orthodox collective beliefs. Thus, modernists justify their **motivations** by either the non-consequential or the consequential theory of ethics. The demerits of their approach are the questionableness of their assumption that there is one clear-cut, perfect solution and their unwillingness to adopt more

rigorous ethical reasoning (Mele in Maclagan, 1990; Krolick in Weiss, 1994:79-80; Sen in Chan, 2001).

Since the modernist AT focuses on the uni-dimensional economic view of human nature and encourages 'command and control' approach to governance (Tricker, 2000:294-5), it tends to de-motivate or restrict board members and allow short-term goals or selfish concerns to prevail over the longer-term common interest. Indeed, AT may be considered as only a subset of the more general stakeholder relationship (Vinten, 2000:41).

Postmodernism in Management

In contrast to modernism, the postmodernists (narrowly defined here for its use in management ethics) reject the notion that there is one school of supreme, absolute ethical principles (Lovibond in Boyne *et al.*; 1990:155). They argue that each rival theory may have its own merits and demerits, and that most ethical dilemmas have probably no single or simple answers. Thus, postmodernists perceive an inevitable shift from the conceptual 'absolutism' in social sciences to 'pluralism' and relativism (Boyne *et al.*, 1990:12, 98-100, 113 & 155).

Pluralism, as opposed to monism, is defined here as 'the philosophical idea that there may be more than one ultimate principle'; and pluralists are

skeptical of any claim of exclusive truth or formal principles of ethics, virtue and character (Donaldson, 1989). They condemn modernist management concepts for creating manipulation, alienation, isolation and mistrust (Boyne *et al.*, 1990:16). Pluralism thus prepares us for boundary-less movement from one theory to another, e.g. from AT to SST and SHT. In addition, autonomy is a necessary outcome of pluralism, meaning that people should be allowed to make their own decisions. Pluralism also implies multidisciplinarity, availing oneself to philosophy, psychology, sociology etc. (Malachowski, 1990; Dees in Bowie *et al.*, 1992; Snell, 1993; Mitmick, 1993; Hosmer in Weiss, 1994; Carroll, 1996:7; Buchanan *et al.*, 1997).

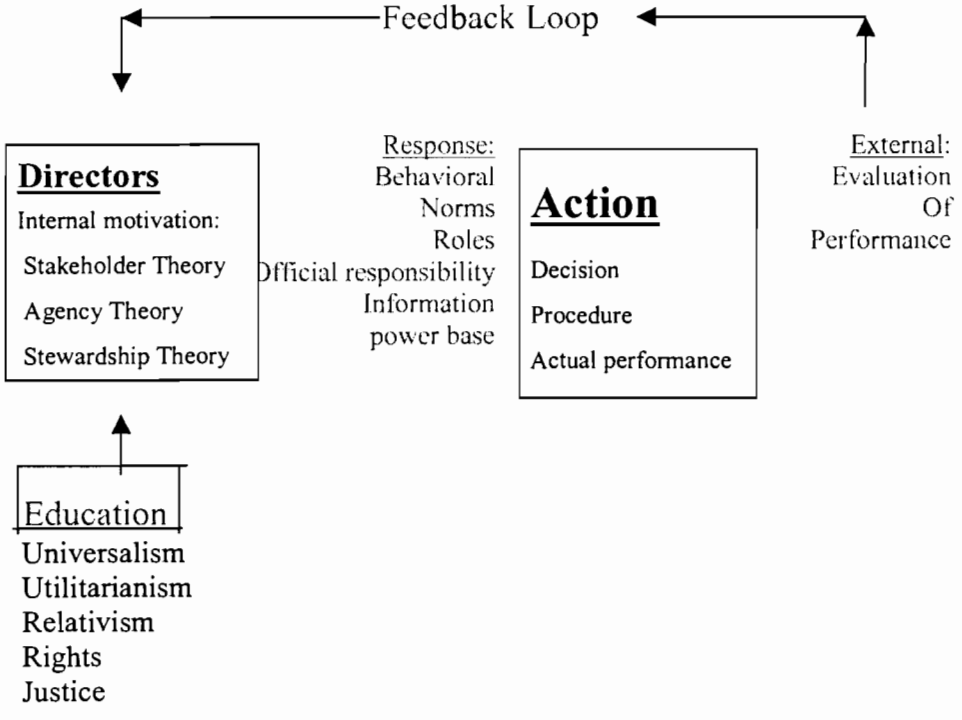
The Ethical Reasoning Model

For organizations in general and for NPOs in particular, I attempted to use an SHT-based model to re-direct board members' attention to the three important concepts of: internal and external motivations, and the social learning process.

My model building started with motivational theories that postulate that as decision-makers, directors' behaviour is influenced by both their internal and external motivations (Mitnick, 1993:22, 34 & 112; Drucker, 1995;

Fukuyama, 1995 & 1999; McDonald *et al*, 1999:134-6; Tricker, 2000; see also pp. 77-86). According to psychology, such motivations may be explained by either Maslow's hierarchy of needs (Handy, 1976:23-52) or Kohlberg's Moral Development Model (Gross, 1996:12-3 & 697-705; Cardwell, 1999:148).

Fig. 2.5 Stakeholder Approach to Ethical Reasoning:
an Education Model



Source: the author, 3.2000
Based on – Motivational Model by Malachowshi, 1990
'A Managerial, Stakeholder Approach' by J. Weiss, 1994 &
'Social Learning Theories' by D. Wilson, 1994

The motivational model was further refined for it to be applied to governance using the SHT approach (Kendal *et al.*, 1998:18, 125 & 180-94) instead of the MNG, AT or even SST approach. I argued that for stimulating socially responsible behaviour, directors' internal and external motivations must comprise pluralist elements, i.e. not only economic and legal, but also ethical issues (Velasquez, 1992; Steidlmeier, 1992:170-2; Weiss, 1994; Carroll, 1996:58-61; Polonsky *et al.*, 1997:1-27; Cornforth *et al.*, 1999:353-60; Gay, 1999:233-5; Vinten, 2000:41; Burton, 2000:198-200). In other words, directors are urged to adopt a balanced approach and use both economic and ethical performance criteria to evaluate their roles, responsibility and performance etc. along the two dimensions of business acumen and social value (Kendal *et al.*, 1998:xi; Kanter *et al.*, 1994:231-3). According to philosophy and business ethics, the directors' internal motivation (the seven dependent variables, see Kendal *et al.* 1998:139-43 and p.81, (1) below) may be explained by ethical principles such as virtue ethics, consequentialism and non-consequentialism (Mulligan, 1986; Osborne, 1996:19; Tricker, 2000; Vinten 2000). For the seven groups of external motivation (see p. 82, (2) a & b below), pluralist elements for socially responsible behaviour are

incorporated into the sixty-one independent variables. The majority of these motivational variables were taken from the behavioral model of the 'Profile of Organizational Characteristics' developed by D. Miller (1991:378-385). According to Miller, these seven groups of motivational variables have been used for managers, supervisors and employees in general, and have been proven to be able to explain and even predict human behaviour.

To tailor-make Miller's questionnaire for the study of governance and the behaviour of directors, some additional variables were taken from the 'Six Attributes of Board Members and Executives' by Kramer (in Powell, 1987:245-6) and many of the contents of the questionnaire were modified to describe directors' motivations. Altogether, the resultant sixty-one variables are the subsets of the seven constructs of organizational variables that have been used by various scholars in the study of effective boards: norms (Schultz & Steiner in Shotter, 1993; Johnson *et al.*, 1997:21-3; Velasquez, 1998:181); power (Worthy *et al.* in Sutton, 1993; Johnson *et al.*, 1997:401-41), roles (Benne *et al.* in Buchanan *et al.*, 1997:226; Johnson *et al.*, 1997:20), information (Damer, 1995; Wadeley, 1996; Johnson *et al.*, 1997:141), official responsibility (Buchanan *et al.*,

1997:210-74 & 491; HBR, 1999:54-72 & 90; Nanus *et al.*, 1999:104), performance and evaluation of performance (Powell, 1986:252; Jackall, 1988; Drucker, 1992:203-30; Shaw *et al.*, 1995:32-3; Brenner *et al.*, 1995; Firstenberg, 1996:177; Buchanan *et al.*, 1997:210-74; Baty, 1998; HBR, 1999:54-72 & 80-9; McDonald *et al.*, 1999:133-46; Fortune, 17.4. 2000:114). In the end, over 70% of the questions had been modified to make them more user-friendly and suitable for the research topic.

Lastly, my model was refined using SLT (Bandura in Batson, 1991 & in Gross, 1996:173 & 688-93; see also pp. 70-1). The final ethical reasoning model makes the assumption that in order to stimulate socially responsible behaviour, certain internal and external motivations (preconditions) at the individual and organizational levels have to be met (McDonald *et al*, 1999:134-6). These motivations are the different elements that will affect the exercise of good governance, and are explained as follows:

1. For effective governance, directors must first have the intention to act in a socially responsible way (Duca, 1996:3-4). Such intention will depend on their internal motivation and influenced by external motivation (*ibid.*). Directors' internal motivation will be enhanced with the awareness of the various ethical theories of utilitarianism, deontology, justice and human rights (Kendal *et al.*; 1998:285). Commitment to

socially responsible behaviour has to do with directors' personal moral values and motivation to apply ethical principles (Duca, 1996:3-4 & 17; Kendal *et al.*, 1998:157-70). In more concrete terms, Kendal *et al.* (1998:139-43) have identified the spectrum of directors' incentives to perform as personal self-interest, benefits to his/her company and the NPO, operation efficiency, friendship, social responsibility, personal morality and professional codes (all are used as the incentive group of items in my questionnaire). The instrumental and terminal values of directors are, according to interactionism, mediated by other factors, notably factors at the organizational level, education, training or other ethical programmes in ethical theories (McDonald *et al*, 1999:134-6).

The importance of internal motivation and stakeholder concept is obvious when external regulations and checks-and-balances have, in many of the recent corporate scandals, proven to play a limited role in ensuring that directors will behave ethically. Governance power may often be open to abuse by directors who subscribe to self-interests above other principles; for examples, Ken Lay of Enron, Dennis Kozlowski of Tyco, Winnick of Global Crossing, and John Rigas of Aldephia.

2. External or organizational factors that promote or discourage directors' socially responsible behaviour and that give positive and supportive feedback or otherwise (Kendal *et al.*, 1998:18; McDonald *et al*,

1999:134-6). They are the independent variables in my model that involve and empower the directors in relation to issues of significance. I have tried to place emphasis on stakeholder as well as shareholder interests into these variables (Kendal et al., 1998: 125 &127-136).

These variables may be examined under five headings:

a. values central to the organization called either by the name of norms, goals, policy, or general ethical climate (Wilbur *et al.*, 1994:9 & 54). Directors tend to recognize norms and act within them because of various uncertainties, their desire to be correct and the pressure to conform etc. (Cardwell, 1999:53).

b. the other six groups of independent variables are given by Miller as perceived directors' roles, responsibilities, power base, access to information, performance evaluation and incentive system (see also Wilbur *et al.*, 1994:54-8; Duca, 1996:19). They represent the organizational tangible or intangible support for the directors to perform (Kendal et al., 1998:157-70). It is hypothesized that there is a strong relation between effective board and what the directors perceive as their roles, power, responsibilities and performance etc.

c. economic conditions such as the availability of sufficient resources, and reliable and timely information to facilitate directors to act in a responsible way (Kendal *et al.*, 1998:157- 170).

d. the evaluation process that closes the feedback loop. Here it is hypothesized that not only the knowledge beforehand of the possible consequences, but also the outcome can stimulate and reinforce directors' socially responsible behaviour. Objective and frank evaluation of directors' performance is an important step in the social learning process.

e. education and learning through information and evaluation of performance to stretch directors' imagination and ability about their ethical obligations (Kendal *et al.*, 1998:9; McDonald, *et al.*, 1999:141-2; Cardwell, 1999:145). Here, my model assumes the continuous reciprocal interaction among cognitive, behavioral and environmental determinants in the learning process. Directors' learning can be done through response consequences (the intrinsic/extrinsic satisfaction and the extrinsic rewards) or observation of others who serve as models.

In sum, my model focuses mainly on the inter-relationship of human internal and external motivations, corporate social responsibility and social learning applied to nonprofit governance (Carroll, 1996:58-61; Burton, 2000:200; Cadbury, 2000:12). It may not be a definitive process to identifying and resolving ethical dilemmas, but I believe that it can enlarge our understanding of nonprofit governance by including the

ethical dimension beside economic concepts in the model.

My SHT approach to nonprofit governance has the intention that the board's decision will be the majority's wish and be in the balanced interests of not just one dominant coalition, but of many stakeholder groups (Keim *et al* in Mitnick, 1993:14 & 129; McDonald *et al.*, 1999:133). The model seeks to reduce moral hazard through debates and careful analysis of the internal motivations, the circumstances that the directors face, and the effects of each decisional alternative on stakeholder groups (Shaw, 1995; Kenyon, 1998:220-5). It calls for full moral adhesion on the basis of obligation rather than expediency (Fox, 1985; Dworkin, 1985). The model holds the directors and the NPO equally responsible as decision-makers, and emphasizes their evaluation of the process and the outcome of alternative actions that affect all stakeholders (Kenyon, 1998:220-5).

My model also contends that directors should aim to identify how benefits accrue to the wider community. I have hypothesized that the truly independent NEDs and EDs with well-defined conceptions of social responsibility will govern the NPOs and achieve performance through influencing its culture, norms, structure, process and people. As regards

motivations, these directors are assumed to have taken into consideration major ethical theories of utilitarianism, deontology or duty ethics, justice, natural law and human rights; and not just agent-centred ethics where attention is directed to the agents' personal gains (Carroll in Weiss, 1994; Mahoney, 1998). Each competing ethical principle may become more or less dominant according to circumstances. I also stress that careful collection of information and analysis of all alternatives, combined with a deep sense of caring about stakeholder welfare, can remove ignorance or willful disregard of the ethical issues at hand, and can substantially affect the quality of their strategic decisions (Snell, 1993; Hosmer in Weiss, 1994; Gilbert, 1996; Maclagan, 1998).

I see the common thread throughout the various topics on management ethics, nonprofit governance, governance ethics and even research methodology, as the emphasis of diversity, pluralism and interaction among individuals and circumstances (Sullivan, 1994; Shaw *et al.*, 1995:31-2; Trevino & Nelson, Vallance in Maclagan, 1998; Valesquez, 1998:ix & 33; McDonald *et al.*, 1999:135).

Hypothesis Development

In my interactive model and hypotheses, I try to establish a link between

good nonprofit governance and performance in terms of a complex interplay of eight groups of organizational/personal determinants (or constructs) in boards' decision making process (Gouran, 1982; Janis, 1993; Cornforth *et al.*, 1999:360). By interactive is meant that directors' efforts depend on how they set their social and economic targets and measure the output as positive or negative feedback in relation to their internal or external motivations (Mitnick, 1993:3, 6 & 20; Davis *et al.*, 1997; McDonald *et al.*, 1999:135). The criterion set of internal motivations (or worldviews or value systems) of members is based on philosophical principles in general and on ethical principles in particular (McDonald *et al.*, 1999:133-6). They are seen to influence behaviour, and shape the board's social and economic outputs in NPOs (Mitnick, 1993: 112; Davis *et al.* 1997:27 as quoted in Burton, 2000:198; Cornforth *et al.*, 1999:347). The predictor sets of external motivations include contextual factors such as the **norms** to conform, members' **roles** and **power base**, their sense of social **responsibility** or goals to be achieved, how members interact in evaluating **information** and **performance,** that I have expounded under the topics of management, governance, psychology, politics, and group decision making in Chapter I (Drucker, 1992:203-30; MDC, 1997:64; Gay,

1999:231; Heracleous, 1999:281-2; McDonald *et al.*, 1999:133-6; Cadbury, 2000:11-2). These determinants necessarily lead to or reflect members' proactive or active participation that is crucial to the effectiveness of the board.

From the model, seven hypotheses were formulated and tested to show whether directors are predominantly internally motivated or predominantly externally motivated toward socially responsible behaviour.

Motivation in Governance

Mitnick (1993:97 & 100) argues that directors' motivations determine the extent of their involvement. Their behaviour can be explained through modelling the basic features of the incentive relation with the organizations and stakeholders (see also Freeman 1984 in *ibid.*:91; Rubin in Bunker, 1995, xxviii; Drucker, 1995; Fukuyama, 1995 & 1999; Tricker, 2000). He also suggests that through manipulation of the incentive relation, it is possible to manage the performance of an organization to satisfy its stakeholders/constituency (Mitnick, 1993:96).

Unlike Mitnick's model, my ethical reasoning model for the NPO sector emphasizes compassion and cooperation rather than manipulation. It is

based on the internal and external motivations that are widely shared by members, and on situational factors that affect performance, whether economic or social (Cornforth *et al.*, 1999:347). In this connection, members may be motivated by altruism, commitment to NPOs' goals, the avoidance of harm to community, or their recognition that mutually advantageous partnership is the best, most effective long-term strategy (Owen and Grossman *et al.* in Vinten, 2000:39 & 42). Motivations that are egoistic include social or political affiliation, career advancement, use of public resources to one's own benefit, exertion of influence on public policies, power and status (Epstein in Mitnick, 1993:36). To give the same uniform direction along the directors' sense of social responsibility, I have reversed the scores (pp. 133-5 &159) for these internal egoist motivations. I have construed the internal motivations as the dependent variables (or the 'criterion set'), and the external motivations as the independent variables (or the 'predictor set'). By incorporating the pluralist elements, I developed these variables in order to reflect also the expectations of stakeholders, not just of shareholders.

As explained under the 'Ethical Reasoning Model', the various independent variables are clustered into seven groups. By having clusters,

it is easier to study their particular strength as a group of constructs. These variables have been tested using the correlation matrix in Canonical Analysis to be largely not correlated with one another.

The basic assumptions that directors will behave according to the values they place on the outcome of the internal satisfaction from such behaviour, from successful accomplishment of goals and/or from the external rewards for such behaviour (Bandura, 1976)

Norm

My first hypothesis states that:

*Hypothesis 1, HO1. The stronger the board members' perceived normative orientation (**norm**) towards stakeholder and social responsibility, the more strongly board members will participate because of intrinsic rather than instrumental (extrinsic) motivation.*

Corporate normative orientation may be defined as the organizational/societal moral climate/ethos and behaviour, set by the Chief Executive Officer or the governing body as a whole (Carroll, 1996:160-6; Turnbull, 1997:181 & 193; Johnson *et al.*, 1997:21-3; Velasquez, 1998:181). It is a collective mental programming, a shared system of meaning, or a pattern of the basic assumptions with which a

group adapts externally and integrates internally (Wood in Dickson, 1997:414). Surface manifestations may include - slogans, mores, customs, stories of heroes, symbols, rituals and office design. Deeper aspects of norms include social, economic, legal, moral and self-regulatory values and responsibilities (MDC, 1997:45-49). Velasquez (1998:181) contends that corporate culture or norms have given managers and employees explicit or implicit guidelines about how 'they should manage themselves and other employees', or how 'they should conduct their businesses'.

It could be argued that members' incentives to perform/conform and the corporate normative orientation or norm are interdependent (Sonnenfeld, 1982 in Mitnick, 1993:280; Mitnick, 1993:61, 96 & 100; McDonald *et al.*, 1999:135). A leading member with very strong intrinsic motivation can have great influence and shape the organizational culture. Conversely, a member with instrumental motivation may simply conform to the prevalent norms, especially under the influence of groupthink and the perception of diffusion of responsibility, etc. (Janis, 1993; Johnson, *et al.*, 1997; Shaw, 1999:32-3). Business people working as NEDs in NPOs may typically bring along the norms from a 'managerial perspective'. Depending on their individual characters, these NEDs may either share

such norms/motivations to shape the behaviour of boards in the NPOs, or conversely become 'native' to the NPOs' norms (Burton, 2000:200).

Champy *et al.* (1995) contend that it is the board's responsibility to influence organizational culture or **behavioral norms** by building into it an ethical climate, through exemplary actions, strategic and structural changes, ethics programme, performance measures and incentive schemes (Woodstock Theological Centre, 1990; Snell, 1993:156-73; Kanungo, 1996:1-7).

Roles

My second hypothesis states that:

Hypothesis 2, H02. The stronger the directors' perception that the directors are playing active ***roles****, the stronger the sense of stakeholder and social responsibility exhibited by both types of members (i.e. Executive and Non-Executive Directors).*

I see another key governance issue as the directors' perception of whether they actually have a directorial **role** to play (Wilbur et al., 1994:31-9; Duca, 1996; Benne *et al.* in Buchanan *et al.*, 1997:226; Johnson *et al.*, 1997:20; Kendal et al., 1998:101-9; Clatworthy, 2000:167). Part of this relates to whether directors can clearly understand the purpose of the

organization, for then their motivations may become stronger in the act of formulating strategies to achieve its purposes, and in the balancing of the demands of stakeholder groups that the NPO serves (Brenner *et al.*, 1995; Firstenberg, 1996: 209; Cadbury, 2000:8; Vinten, 2000:40). They must also be aware that their roles are strategic and not operational; i.e. that they do not just control the management, but that their roles in adding value lie in improving decision making, articulating the mission and sustaining the values of the NPO. They may then be more inclined to elevate their own internal motivations to higher moral stages (Brenner *et al.*, 1995; Baty, 1998:6Cornforth *et al.*, 1999:347-9). Weaknesses in the directors must be countered by periodical review of their roles and the board's performance. It is envisaged here that the directors' internal motivations determine their roles and vice versa, i.e. mutual causality (Cornforth *et al.*, 1999:352-60).

Official Responsibility

My third hypothesis states that:

Hypothesis 3, HO3. The stronger the directors' perception that the directors have important ***official responsibility****, the stronger the sense of*

stakeholder and social responsibility exhibited by the two classes of members.

I believe that good governance requires clear understanding of, if not the definition and agreement, the mutual social and economic responsibilities between the stakeholders and directors (Tam, 1997; Cadbury, 2000:10 & 14; Vinten, 2000:39; Dedman, 2000:133; Sen in Chan, 2001). When directors are aware of their formal roles, their responsibilities and accountabilities to multiple stakeholder groups, their motivations to perform and achieve the super-ordinate goals will be enhanced (Duca, 1996; Carroll, 1966: 179; Buchanan *et al.*, 1997:210-74; Clatworthy, 2000:167). If they are confused about their responsibilities, they pursue egoist motivations instead, which typically would be perceived by others as motivation for personal gain.

Power Base

My fourth hypothesis states that:

Hypothesis 4, HO4. The stronger the directors' perception that the directors are able to wield expert and referent power ***(power base)****, the stronger the sense of stakeholder and social responsibility exhibited by the members.*

Power is another contextual or institutional factor in governance (Tricker, 1992:1-8 & 1998; Johnson *et al.*, 1997:401-41; Kendal et al., 1998:106 & 188; Cardwell, 1999). Participative and cooperative inquiry (the basis for independent assessment of the board's performance) requires the reform of board structures. Such reforms would entail basing power on members' personal attributes and awareness of social responsibility, legitimacy, and roles; rather than just on their relationship with and access to power centres, information and resources (Esptein in Mitnick, 1993:12-3, 50-1, & 254; Bunker, 1995: 25-26; Tam, 1997; Heracleous, 1999:276-8; Cadbury, 2000:11). Such reforms concern also reducing the arbitrary authority of others to nominate, appoint and remove directors (Gay, 1999:231). A high level of directors' independence, whether they are executive or non-executive, is usually associated with superior performance (Heracleous, 1999:256-84; Burton, 2000:200).

Actual Performance

My fifth hypothesis states that:

Hypothesis 5, HO5. The stronger the directors' perception that the directors can beneficially affect the ***actual performance*** *of the NPO, the stronger the sense of stakeholder and social responsibility exhibited by the members.*

Performance is about efficiency, effectiveness and equity. For NPOs, '**efficiency**' should be defined as the sum of economic, social and family efficiency; '**effectiveness**', as the achievement of its strategic objectives; and '**equity**', the distribution of outputs consistent with the agreed policies, social, political and economic (Alexander & Buchholz, Cochran & Wood, Sturdivant & Ginter, and Ullmann all in Jones, 1995).

Both Cadbury (2000:7-9) and Vinten (2000:40) consider that not only financial reporting and accountability are essential performance issues, but also the **roles** of competent NEDs and their stakeholder relationships. Independent directors' awareness of their roles and the efficacy in their roles, along with the flow of reliable and timely **information** (see next paragraph) enable them to interpret the issues facing the NPOs and to perceive the contributions that they have made to the actual performance when doing their self-appraisal (Buchanan *et al.*, 1997:210-74; Cornforth *et al.*, 1999:346).

Access to Information

My sixth hypothesis states that:

*Hypothesis 6, HO6. The more the access that the directors perceive themselves to have to relevant, reliable and useful information (**access to***

***information**), the stronger the sense of stakeholder and social responsibility exhibited by the members.*

The distribution of relevant, reliable, accurate and timely information is not only an important performance issue, but also the lifeblood of governance (Mitnick, 1993:17-8; Damer, 1995; Wadeley, 1996; Johnson *et al.*, 1997:141; McDonald *et al.*, 1999:135; Cadbury, 2000:9; Clatworthy, 2000:168). When EDs do provide the needed information, the whole board can understand the factors influencing its performance and future prospects (Vinten, 2000:40). If EDs filter or control information, then information asymmetry and bounded rationality will diminish members' motivations and affect their performance (Getz in Mitnick, 1993:250-3; Mitnick, 1993:61, 96 & 100; Wilbur et al., 1994:51; Duca, 1996; Kendal et al., 1998:101-9, 157-70 &213).

Evaluation of Performance

My seventh hypothesis states that:

*Hypothesis 7, HO7. The stronger the body of evidence the directors perceive is available for directors, upon which to base their judgements concerning whether or not the NPOs were performing well (**performance evaluation**), the stronger the sense of stakeholder and social*

responsibility exhibited by the members.

There is now growing consensus that formal appraisal is associated with improved performance (Nowland *et al.* and Kendrick in Mitnick, 1993: 275; Buchanan *et al.*, 1997:210-74; Kendal et al., 1998:26, 106, 157-70; Heracleous, 1999:281-2). Many of the six determinants above enable the board to think and talk about their own purposes and performance (Vinten, 2000:40). There are suggestions that the board should evaluate the actual performance of the CEO and individual members regularly against established goals and strategies; and in doing this should, for NPOs in particular, give due consideration to service to their stakeholders (Mitnick, 1993:17-8; Gay, 1999:230; Vinten, 2000:39). Adoption of the stakeholder approach or the activation of directors' internal motivations can raise their awareness of the need for corporate social responsibility, reality and sensitivity; and enable more critical performance evaluation (Carroll, 1996:179). Cadbury (2000:10-1) argues that independent NEDs can perhaps better carry out this vital task of performance evaluation, as this task requires moral courage and independent judgement to raise unpopular propositions. Vinten (2000:43) adds that the board should benchmark its targets for actual performance against the performance of 'best in class' organizations. There will of course be the criticism of multiple performance criteria from different stakeholder groups (Mitnick, 1993:287-90). The process of **performance evaluation** completes the

feedback loop in my ethical reasoning model (pp.77-86), and is the essential part of the Social Learning Theory.

SLT in Governance

ME and SHT are new perspectives for directors and have to be learned. One way for them to learn these new perspectives is through formal education. In applying SLT to my model, I assume that directors learn not through direct reinforcement but through everyday experience as influenced by organizational factors and social processes during board meetings, etc. and observation of the behaviour of role models and mental rehearsal of the actions they display. The observed behaviours are imitated and the cycle is completed. SLT is better able to explain these day to day learning processes and complex socially responsible behaviour, than other models of learning based on simple reinforcement (that causes the desired response to be repeated more often in the future (Cardwell, 1999:221). It should also be pointed out that SLT emphasizes that people's behaviours are acquired (learned) and influenced by many factors. AT has subscribed to the over-simplified view that reward and punishment can change almost any behaviour (*ibid.*:28)

My own analysis of the linkage of the hypotheses to SLT is as follows: H1 reflects SLT in that if directors see that the norms support stakeholder

and social responsibility (which presume internal motivation on the part of the socially responsible person), they will nurture internal motivation in themselves.

H2, H3 and H5 reflect SLT in that if directors see that they are expected to (and perform) play an active, meaningful, responsible and efficacious role, they will behave accordingly.

H4 reflects SLT in that if directors see that their power is used to gain others' commitment rather than to coerce or 'bribe' them, they will use power properly.

H6 reflects SLT in that if directors see that others are well informed, they will follow suit and become well informed.

H7 reflects SLT in that if directors see that they get rich and detailed feedback on their actions, they can improve their actions in order to serve purposes that they believe are socially responsible.

Socially responsible action presumes altruism in which there is no selfish external motivation on the part of the person. The 'social cause' is pursued because the person believes that it warrants action for its own sake. It requires the directors to be well informed and active rather than passive. It also requires change through dialogue, expert analysis and friendly

persuasion rather than through force or 'horse trading'. Specially, socially responsible behaviour requires directors' ability to learn through feedback on the consequences of their decisions and actions. If behavioral norms, formal and actual roles, official responsibility and power are perceived to be clearly defined; information on actual performance or other issues is shared; and performance properly evaluated; then the obstacles to implementing directors' governing roles are removed, and the sense of social responsibility exhibited by directors will be strong.

Research Objectives

The above seven hypotheses, based on my ethical reasoning and education model and evolved from a qualitative approach, were tested using a quantitative research tool (see Chapters III and IV). This was in accordance with the threefold aims of my research:

1. to carry out a qualitative-and-quantitative research of board members' behaviour in the local non-profit sector, where directors may or may not share homogeneous motivations because of their backgrounds from either the business or the voluntary sectors;

2. to find out the extent to which the perceived motivations and actual behaviours correlate, given the variations in the independent variables of behavioral norms, roles, official responsibilities and actual performance etc.; and
3. to present the results in the form of statistical summaries and compare these with the original hypotheses.

Implications of My Theory

Basically, my research addresses a fundamental question in economics, 'are men egoistic or altruist in nature?' The central issues in my theory are social and moral norms arising from human interaction, and ethical principles including social justice, humanity and welfare as motivations (Bunker, 1995:xix). Sen (in Chan, 2001) has convincingly argued that while economics based on egoism and utilitarianism has contributed to unprecedented wealth creation; personal gain and profit maximization are not the only motivation. In his criticism of such uni-dimensional conception of human motivation, he points out the complexity of human motivation and advocates the inclusion of ethical elements in the study of economics. To me, only complex motivations can explain whether directors' behaviour may differ from sector to sector, under similar

situations; and only complex motivations can lend to a dualistic model embracing both ethics and economics. I believe that we must understand complex motivations if we are to sustain an orderly development into a civil and thriving community (*ibid.*; Drucker in Ho *et al.*, 2001).

In essence, my theory contends that if the directors' internal and external motivations are ethical, then they tend to achieve long-term effective performance and social harmony. If these motivations are unethical; then, their short-term performance may be good, but the long-term outcome for the whole community will be harmful (*K. S. Li* 李嘉誠 in Ho *et al.*, 2001). In a way my theory echoes Confucius' 'Moderation', in that all parties must subscribe to ethical motivations and reciprocal interaction, such that the community as a whole will reap the best possible outcomes (CCS1 & 2, 1983 & 1984).

As a corollary of my theory, directors are recommended to consider restructuring not only their board, but also the organizational environment, starting with an **ethical programme**, entailing training, empowerment, improved communication, ethical audit and other early warning systems. A central aspect of training would be to ensure that directors are aware that they are making decisions that would affect stakeholders, and that

they should not treat such decisions lightly as impersonal, but always with compassion.

Ethics Programmes

An ethics programme helps meet the demand for social responsibility (Business Roundtable, 1988; McDonald *et al.*, 1999:133). Such programmes may begin with directors' guidelines, a code of practice, a careful review of the reward system, and the setting up of an audit committee with procedures for reporting and investigating ethical concerns and for measurement of results (Tome, 1986; Gavin *et al.*, 1990; Vinten, 1990 & 2000; Drucker, 1992:210; Cadbury, 1993; Weiss, 1994; Snell, 1996:29-31; Sikula, 1996; Baty, 1998:6; Obsborne, 1996:25; Wong, 1999; McDonald *et al.*, 1999; Tricker, 2000).

Critics of ethics programmes contend that they may be used to window-dress the profit motive when management just adopts it to improve profitability and competitiveness (Dam *et al.*, 1978; Tome, 1986; Donaldson, 1989; Velasques, 1992; De George, 1995). It may indeed be difficult to convince management that the programme is an effective tool for long-term survival and prosperity. Advocates nonetheless argue that an ethics programme still benefits all stakeholders; as shown by success

cases including Boeing, Johnson & Johnson, the Champion Way and the Hewlett Packard Way (Business Roundtable, 1988; McDonald *et al.*, 1999; Williams, 2000).

Some Concluding Remarks

Although my model was developed for NPOs, it should be mentioned that the practices of governance in the three sectors of government, business and nonprofit appear to have converged (Mitnick, 1993:51; Vinten, 1997 & 2000; Cadbury, 2000:11-3). For instance, the problems and solutions in the three sectors have been seen to be common. Geneen (in Weiss, 1994:122) has estimated that 'among the boards of directors of Fortune 500 companies.... 95% are not fully doing what they are legally, morally and ethically supposed to do. And they couldn't even if they wanted to'. Likewise in HK, many NEDs in school boards are reported to be either titular or passive (HKEJD, 30.10.1999:A14). On the other side, managerialism is being introduced into NPOs to make them more efficient; while, in order to create the necessary checks-and-balances mechanism, the private sector is now appointing NEDs to their boards, a practice long adopted by NPOs (Drucker, 1946).

Increasingly, social responsibility, humanity, justice, generosity and other intrinsic values in altruism - the basis of NPOs - have now become issues in corporate governance (Chan, 2001; Ho *et al.* 2001). While similar

ethical underpinnings in my model may be criticized for being 'too' organic and multi-dimensional; I hold that this reflects the complexity and subtlety of social reality. An analogy may be drawn with the newly developed M Theory in the field of natural science. The M Theory attempts to capture both the quantum theory and relativity, by incorporating the duality of particle and wave motions and its 11-dimensional world (Time, 31.12.1999:53).

CHAPTER III RESEARCH METHODOLOGY

Overview

My research on nonprofit governance began with a process of exploration and theory evolution through qualitative study and literature review of a number of different but related disciplinary topics, and was then complemented by theory testing through collection and analysis of primary data. Originally, I sought to conduct a once-and-for-all definitive, single-discipline project (Campbell *et al.*, 1963; Nachmias *et al.*, 1997). I owe my conversion to a life-long exploratory, multi-disciplinary learner of governance to scholars like Gummesson (1991). Exposure to a range of perspectives impressed upon me that governance behaviour cannot be adequately explained through a single disciplinary paradigm. I realized, for example, that even competing ethical theories such as consequentialism and non-consequentialism are not mutually exclusive in an ethical reasoning model. I also subscribe to the argument that any worthwhile subject such as governance deserves continuous study as an on-going progression towards the truth. In the same vein, I share Campbell *et al.*'s (1963) view that knowledge is 'the resultant of an accumulation of selectively retained tentative theories, remaining' after

winnowing away the chaff by experience. In my exploration of corporate governance, I gained through literature review and qualitative approach new insights on governance and its applications in new sectors (Campbell *et al.*, 1963; Gummessons, 1991; Layder, 1993). After examining the practices in the three sectors of government, business and nonprofit; I agree with Ragin (1994) that by suitably combining qualitative and quantitative approaches, one could explore diversity across cases, identify commonality and evince important patterns of co-variation. I therefore had followed Ragin's advice and in this chapter I shall describe and explain the research design that I had adopted.

Research Design

Adopting an open-minded posture, I revised my envisaged strategy of research design after my exposure to the various theories, practices and research methodology during my literature review. At the outset, I had planned a case study of the Vocational Training Council, VTC, a non-profit statutory government subvented body charged with the responsibility of technical manpower training and development. I had envisaged that the research would adopt a quantitative, positivist approach broadly embracing Middle-Range Theory.

At that time, the VTC had a complex of 18 industrial training boards and general committees (TBs/GCs) reporting to the Council itself. The TBs looked after some fifteen specific economic sectors but the GCs looked after cross-sectoral areas such as information technology and postgraduate training. There was synergy but little overlapping among TBs/GCs. I had planned to mail the questionnaires to only the 300 TB/GC members, the majority of them unpaid NEDs from the business sector. I had planned to feed data collected into the 'SPSS Cancorr' - a canonical correlation program similar to the later version of 'SAS Cancorr' - for quantitative analysis.

However, the idea of a case study of a single organization was dropped because:

1. a consultant firm, the Sequal Quince Wicksteed Ltd. (SQW, 1997), was commissioned by the Education and Manpower Bureau (EMB) in 1996 to study the Council although for a different purpose; the outcome was a report on 'The Strategic and Organizational Review of the VTC' in 1997;

2. after doing some literature research in qualitative methods, I was convinced that the planned hypotheses testing based

on a preconceived concept would tend to force-fit constructs into a preset framework. I decided that any hypotheses should first be closely examined and refined with insights gleaned from multi-disciplinary literature review and some in-depth interviews;

3. it was felt that I, an employee of the Council, might not be objective enough when attempting the interpretation of the data;

4. given the close connection between myself and many target respondents; although 'informed consent' could be readily granted, the connection might exacerbate any tendency for data collected to be skewed when interviewees, knowingly or unknowingly, provided information to fit a particular theory that they perceived that I was postulating; and

5. absolute anonymity for samples from a single organization would be improbable. Without guaranteed anonymity, ethical problems would arise and respondents might withhold answers that were too sensitive.

Thus, in the end, my research design was completely revised. Other significant improvements and major discoveries made during the three stages (i.e. literature review, in-depth interview and pilot survey) of my

research study were:

1. After the literature review, my theory building was no longer focussed narrowly on AT, SST and SHT, but had begun to draw on a large spectrum of knowledge and concepts from psychology, sociology, politics, management ethics and philosophy. As a result, I had learned that SHT was very much philosophically based. Therefore, the initial self-centred motivational model based on behavioral studies had evolved into a more elaborate ethical reasoning model, embodying the ideas of situationalism, interactionism and social learning theory from other disciplines.

2. After literature review, I also resolved to drop my original plan to use exclusively positivist approaches. In an attempt to achieve triangulation, I applied Layder's Realist Theory (1993) and modified the original positivist approach to the sequential use of 'qualitative method' for 'theory building' and 'quantitative method' for 'theory testing'. The first part of my research design involved in-depth interviews in order to provide information for the progressive revision of the questionnaire to reflect the real-life situation. The second part consisted of a typical pilot and main survey using mailed questionnaire and statistical tests.

3. After the in-depth interviews, I had appreciated the relevance and importance of the concepts of espoused theory, theory-in-practice, cognitive dissonance, and other psychological phenomena. I used these concepts to re-word the questionnaire so that the respondents could answer them in the third person.

4. to overcome some of the difficulties experienced during interview and anticipated in the mailed questionnaire, I had made some changes to the questionnaire. These changes aimed to put the respondents at ease. For example, the simple, factual profile of the respondents became part I, and the more sensitive questions about personal internal motivations were placed towards the end of part II. The decision to put the group of questions on 'incentive to participate' at the end was made at this stage. The redundancy test (reported in Chapter IV) had confirmed that the re-ordering was prudent, because the canonical correlation between the criterion and predictor sets turned out to be uni-directional, and not bi-directional as I had expected when I designed the questionnaire. It should be mentioned here that the two terms 'criterion' and 'predictor' used in Cancorr were misnomers, because they did not restrict either sets of variables to be 'dependent' or 'independent'

variables. The terms were used with the attempt to avoid the possible misunderstanding of the meaning of dependent and independent variables used in natural sciences; but unfortunately they could be as misleading.

5. After the main survey, it was found to my great disappointment the various means for increasing response rate recommended by other veteran researchers in the West (Dillman, 1978; Powell, 1987) appeared to be ineffective. This might possibly be due to cultural differences or to other prevalent factors at the time of my fieldwork. Incentives that I had adopted included the use of *quid pro quo* (a promised floppy disk of the thesis), donation to charity and establishing personal contact by approaching the CEOs or secretaries for help in soliciting their members to respond. Unfortunately, these measures had failed to achieve a higher than normal response rate of 10% achieved for surveys carried out by the various departments within the Council whenever the respondents were not 'captive'. It might further be surmised that in the prevalent economic climate of downsizing and the proliferation of academic research, very little might be gained by employing such incentives.

6. Instead of 'SPSS Cancorr', I had used the newer and more

powerful SAS Cancorr software, acquired by the Council as a replacement (see pp. 45-7 for justification for the use of Cancorr).

Other Constraints

When I contemplated qualitative approach for theory building, I had also considered the possibility of a full-scale qualitative interview-based study. The idea was dropped because it was rather difficult to persuade some 200 to 500 local respondents of high social status to accept interviews. The cultural reasons for such reluctance have been well explored by G. Redding (1990:249):

1. Chinese are 'notoriously guarded about their own [organizations]';
2. people consider it unwise to divulge information to strangers;
3. respondents expect some equivalence of status between the interviewer and themselves, both to afford their valuable time and to win enough of their confidence;
4. busy board members are notorious for their resistance to long interviews during office hours, as they are often

pre-occupied with other priorities;

5. a norm of reciprocity, especially for the Chinese board members, is inherent in the acceptance of an interview;

6. respondents' suspicions had to be thawed with the guarantee of confidentiality; and

7. respondents' habitual wish to have more time to consider alternative answers.

Another possibility of using telephone interviews was seriously considered, but was eventually ruled out because of the reluctance of the Chinese to discuss important matters over the telephone with strangers (Redding, 1990).

In addition to the difficulties ruling out interviews, the following benefits of conducting a mailed questionnaire prevailed:

1. time and expenditure. In order to ensure better external validity, a sample size of the whole NPO population should preferably be around 20%. If all NEDs and EDs in my selected samples were arranged for telephone interview, this would

mean more than 1500 calls. Thus, only mailed questionnaire *en mass* seemed feasible.

2. attitudes of the respondents. Respondents preferred to do the questionnaire at their own pace and time because of: a. the sensitive nature of this research; b. people's reluctance to discuss relationships openly; c. the frequency for them to be asked for interview; d. the long time required to complete an interview (usually lasting longer than one hour as the pilot interviews had proven); e. respondents' wish to have more time to mull over questions before answering; and f. relative freedom from the personal influence of the interviewer.

3. The clarity of the questionnaire. One potential problem with mailed questionnaires was that respondents might not fully understand the questions. In this research, however, the questionnaire had been tried out in both the in-depth interview and the pilot study. Furthermore, the translation into Chinese and back translation had helped reduce the problem, while not eliminating it completely. In case of doubt, the respondents at

directorate level, who usually understand English; could refer to either the English or the Chinese version;

4. Strict confidentiality. In order to enhance the quality of information collected, names of individuals and organizations were kept in strict confidence. Only aggregate information would be released. The mailed questionnaire had assured them of anonymity so that personal data would not be divulged. This precaution had however posed the problem of inability to identify and chase those individuals not responding.

Based on the above reasoning, it was deemed justifiable to use mailed questionnaires for the main data collection phase. In addition, this method cost less money and took less time to reach widely scattered locations than would have face-to-face interviews.

Questionnaire Used to Collect Data

The questionnaire was adapted from both 'Profile of Organizational Characteristics' (D. Miller, 1991:378-385) and the 'Six Attributes of Board Members and Executives' (Kramer in Powell, 1987:245-6). However, I modified over 70% of the questions to make them suitable for the purpose of this research and more user-friendly.

The questionnaire, with further progressive modifications to incorporate comments made by the preceding interviewees, was used as a guideline for conducting the nine in-depth structured interviews. The nine transcripts were then analyzed. By that time, my theoretical ideas had also been sufficiently developed. I applied my theoretical ideas as the major source and the emerging findings from the interviews as minor source to modify and refine my questionnaire for the main survey.

The revisions made to the questionnaire sought to develop and strengthen multiple-item measures for constructs, for increase reliability and validity. The revisions also aimed to make the questions as simple, unambiguous, short and relevant as possible.

Operationalization of Variables

The questionnaire itself had two parts (App. V, p. 314):

1. part one : personal profile of the respondents: age group, sex, nationality, type of membership, length as board member, HSIC and number of staff in the NPOs.

2. part two : a structured, five-point scale, self-administered questionnaire. The internal motivations to participate in nonprofit governing bodies were the criterion

set and other external motivations were the predictor set. These quantitative relational variables, providing data for analysis and discussion, were taken to be perceptions of the responding EDs and NEDs, not of other stakeholders, e.g. employees, the public. Relying on the EDs' and NEDs' perspectives alone was considered acceptable because the criteria for assessing an NPO could not be disinterested. (Pfeiffer & Salancik, 1974, as quoted in W. Richard Scott, 1992). Both the quantitative relational variables in the criterion and predictor sets are operationalized into measurable quantitative indicators by listing them into statements, each one is to score on an easy-to-analyze five-point interval scale with score '5' for strong agreement and '1' for strong disagreement. The score only tells the order, but not the real distance between the ranks, although the median value has its meaning of neutrality.

The inclusion of as many as sixty-eight variables involved in the analysis was considered necessary for:

1. a deeper penetration into the empirical model;

2. a reduction in the deviation of respondents' perceptions through breaking down the items as far as possible; and
3. Minimization of the inevitable multi-collinearity in the linear regression equation (Bernstein *et al.*, 1988).

Pilot In-Depth Interviews

Although I had come up with a provisional model and a questionnaire useful for quantitative research, I had decided to conduct about ten in-depth interviews using quota sampling to further refine my model and questionnaire. I took heed of Strauss & Corbin's (1990) views that qualitative method in the form of Grounded Theory (Chapter I) is useful in social sciences when theory building is concerned, because it allows what is relevant to emerge and develop into a concrete concept.

On the one hand, qualitative information obtained in interviews enabled me to explore the experience and behaviour of some experienced board members, tapping much greater detail and insight, and to relate their moral reasoning to the developmental stages (see Kohlberg, 1969, 1973, 1981 & 1984 in Gross, 1996:12-3 & 697-705). The first two interviews were conducted inside my office. To put the interviewees at greater ease, all subsequent interviews were conducted either at their places of work or

in neutral areas. Open-ended questions were put to the interviewees who were allowed to talk without interruption except when prompting or explanation was seen to be absolute necessary.

Eight groups of questions were included. The forms of questioning varied from direct, indirect, open-ended and leading, depending on the interviewees' attitudes at the moment. Some interesting initial findings are listed below:

a. the interviewees behaved as expected by the author. This might be due to the author's good knowledge of them, or more likely what the psychologists called 'behaviour confirmation' when the person under study tends to behave in such a way as to conform to the researcher's requirement.

b. the interviewees' espoused theories were often different from their theories-in-use as shown in the contradictory statements they made. Interviewees also had different standards in judging their own and other people's actions. Over 80% of them justified behaviour of their own that they would have branded as unethical in others,

such as rigging in an election, and trying to stay in power by not being honest.

One interviewee, his inconsistency being challenged after the formal interview, therefore questioned whether a field survey was effective in gathering theory-in-use by respondent: stating that more than likely the data provided would be their espoused theories.

In order to try to reduce this problem, some modifications to the mailed questionnaire were made. Originally, the questionnaire was prepared in the second person. After the pilot interviews, it was changed to the third person to make the questions appear impersonal, so that the interviewees talked more easily as if they were referring to some other person.

c. A mixture of altruistic and egoistic motivations were reported. Motivations to become directors in NPOs could be either altruistic or egoistic or both. One interviewee considered the shift in the moral stance a developmental process. Another suggested that it depended on a number of factors: e.g. the significance of

the issue under discussion, the organizational culture and the direction taken by the most powerful member. Originally, this set of questions came at the beginning of the questionnaire, it was judged during the conduct of the interview that the other less sensitive, questions should come first, leaving this section until the very last. As Cancorr tested for bi-directional correlation, the change of order had no effect on the correlation analysis at all.

d. Peer pressure. Peer pressure was often felt to discourage dissenting views and behaviours, e.g. the Chinese disposition to avoid strong arguments and direct confrontation; and the general inclination to avoid rocking the boat. Other anonymous approaches such as behind-the-scene lobbying and anonymous whistle blowing were often preferred over direct confrontation or disagreement.

e. Absence of strategic plans and codes of conduct. Several interviewees had considered neither annual plans nor

codes of conduct as important. The absence of targets or criteria meant that it was difficult to measure the effectiveness and efficiency of the NPOs. Yet in cases where targets or criteria did exist, there was no guarantee that some form of cheating or 'creative accounting' had not taken place.

f. Social responsibility. EDs considered themselves to be more socially responsible than NEDs. They often accused the NEDs not doing their homework, of regarding meetings as social functions, and of absenting themselves or retiring early from meetings.

Other comments on the mailed questionnaire from the interviewees were:

1. The questionnaire was too long, comprising 7 items on personal particulars, and 68 items on dependent/independent variables. The recipients' first impression was that a full reply could take more than 30 minutes. This reaction confirmed other researchers' findings that respondents' cooperation tended to decrease as the number of items increased, and vice versa.

2. the questions were too sensitive, and even if anonymity was assured, respondents might feel uncomfortable, as reflected by the number of respondents out of the total sample in the main survey.

I had tried to take most of these comments into account when revising the questionnaire for the pilot and main survey.

Intended Briefings for the Pilot Survey

After the in-depth interviews, I had modified the mailed questionnaire before selecting some 300 board members of several NPOs for the pilot survey. During the pilot survey conducted in January, 1999, I contacted either the secretaries, the CEO or the board chairmen of the selected NPOs by telephone to establish personal contact and request for an interview. If granted, it was intended that I would visit the selected establishments to solicit better response. I would explain the purpose of the survey, clarify some of the queries, thank the respondents for their co-operation, and inquire if any other persons in the organization would be in a position to reply in their stead or in addition. I would also asked the interviewees to help in reminding their colleagues to complete the questionnaire. In all cases, an interview was not granted probably for cultural reasons listed by

Redding above. I could only seek their assistance both to distribute the questionnaire and to urge their members to respond, or both.

Response Rate of Pilot Survey

Only 26 out of the three hundred target pilot sample responded positively by sending back a completed questionnaire, and among these, two could not be used because of incompleteness. The effective response rate of only 8% was considered to be very low. Other non-respondents when contacted gave evasive or evidently insincere replies. The reasons for non-response were given as their lack of time, their increased workload under the prevalent poor economic climate, and the low priority accorded to academic surveys which frequently targeted these people. It was evident that even if they were persuaded to respond, they would most likely come up with *ad hoc* answers.

Although the responses to the pilot survey were discouraging, a computer programme was nevertheless prepared and the data were input to give the programme a trial run. Because of the fact that the number of questions (68, plus 7 on profile) far exceeded the number of data sets (24), the computer analysis was incomplete. The Senior Statistician who helped run the programme stated that he needed at least a hundred data sets for a

successful analysis by Cancorr. This meant that a meaningful pilot analysis was not possible and that the main survey had to be conducted without one. Several lessons could be drawn from this experience. The questionnaire was slightly modified to make it more user-friendly and the approach to collect them was changed. Instead of asking the board secretaries to distribute the questionnaires, the names of board members were obtained and each was personally addressed. This required considerable time and effort and thus made the progress slower but was intended to increase the response rate by appealing to the directors by name.

Main Survey - Conducting the Main Data Collection

Sample Design The population of the main research framework covered all the EDs and NEDs of all NPOs based on a comprehensive list kept by the Census and Statistics Department (C&SD) in Hong Kong, classified under the nine Hong Kong Standard Industrial Categories (HSIC) (see p. 314). Starting from 1990, HSIC replaced the International Standard Industrial Classifications (ISIC) for classifying the economic activities of establishments in Hong Kong to reflect the structure of the local economy. The total number of nonprofit establishments was estimated to be 650.

Random sampling was adopted for the main survey. Random sampling is one way of assuring representativeness of the research framework. Here, the samples must be selected according to the appropriate sub-sectors. Fortunately the HSIC provided the sample frame for stratified random sampling.

Since only a 20% sample was chosen, internal and external validity of the sample was ensured by:

1. Stratified random sampling of boards/organizations. 20% representative samples were chosen from each of the boards, sorted by industry sectors.

2. The samples included all board members within the sampled boards/organizations, disregarding their age, sex, and ethnic group.

If possible, a phone call was made to the secretary in each of the selected organizations to make sure that the listed members were still active players at the time of the survey before mailing the questionnaire. Alternatively, the list was confirmed by checking the published annual report or other publications of the NPO concerned.

Data Collection

The main survey was conducted from March 1999 to March 2000. The period was long because of the meticulous follow-up action that was required to be taken by me. Copies of questionnaires were sent out to each board member in the 110 samples with follow-up telephone calls to the board secretaries if possible, urging them to assist in order to ensure a high response rate.

In order to enhance the recipients' attention and co-operation, I had appealed to the respondent's community spirit since they were mostly highly educated and responsible people; yet could be over-committing themselves and were no doubt extremely busy. A covering letter in both

Chinese and English bearing the City University's letterhead, also made full use of the personalized approach by addressing each respondent by his/her surname where possible (App. V). The letter emphasized the importance of the research findings, the social usefulness to the respondents and the importance of respondents' contribution to this research. Secondly, I also appealed to the respondents' reciprocity, benevolence and altruism. Respondents were promised a copy of the synopsis of the thesis and a donation of the savings, if any, to charity. A stamped self-addressed envelope was enclosed in the questionnaire for reply. Other steps to increase the return rate of questionnaire had also been used (Miller, 1991:210). But little could be done to alter the sensitive nature of the topic, the length of the questionnaire, or the economic circumstances under which the questionnaire were sent out, i.e. during the Asian financial turmoil, which would have adversely affected the mood among prospective participants.

CHAPTER IV RESEARCH RESULTS

Response Rate of Main Survey

The total number of prospective respondents in the mail survey amounted to 1127 people. Because of the unexpected difficulty in reaching the target of over 400 responses, the originally planned forty-eight months of study had to be extended to September 2000. (Further extension up to December, 2001 was required for the thorough editing of the thesis.) Even with persistent but friendly follow-up by phone calls, there was considerable tardiness in responses. The fieldwork for the main survey started in March 1999, and the last reply drifted in twelve months later.

By end March 2000, 138 people had returned their questionnaire. Four had declined. Six had not completed all the questions. From both the pilot and main surveys, 128 questionnaires were completed fully and correctly. Two respondents had enclosed their own letters, and six with remarks of encouragement. Based on the returned 128 questionnaires, the respondents' profile is analyzed as shown in Table 4.1. In comparison with the norm of 10% for questionnaire surveys conducted to non-captive respondents by the Council, the response rate of 12.2% was considered

acceptable. In comparison with accepted academic standards of 30% response rate, the response rate was admittedly rather low; but it is not unacceptable as shown by the Cancorr programme, which will not produce any printout if the number of respondents is too small in comparison with number of variables. Furthermore, it should be mentioned that for Cancorr, a small number of respondents could still give meaningful output, although the external validity of this research study could arguably be claimed to be not too strong.

Profile of Respondents

The distribution of respondents by industry sector was:

Table 4.1 Respondents by Industry Sector

Public administrations	11
Education	19
Health	2
Welfare association	13
Religions	8
Trade Association	28
Culture	7
Sports	1
Others	39
	N = 128

The characteristics of the respondents are: 86 (67.2%) were under the age of 50 and 42 (32.8%) over 50; 28 (21.9%) female and 100 (78.1%) males. 121 (94.5%) were Asians and 7 (5%) non-Asians. 75 (58.6%) were

non-executive directors and 53 (41.4%) executive directors. 29 (22.7%) had served for over 10 years and 99 (77.3%) for less than 10 years (see p. 231). 80 (62.5%) NPOs employed fewer than 99 persons, and 48 (37.5%) NPOs employed more than 100 persons. 72 used English and 66, Chinese.

Data Analysis and Form of Presentation

The author checked returned questionnaires manually for completeness. Scores were based on a five-point interval scale with score '5' representing 'strongly agree' and '1', 'strongly disagree'. Scores on those statements (marked with an asterisk) were reversed to provide consistency of direction within each set of variables. They would then be subjected to validation/correlation checks and final analysis by computer. Where there were no entry or double entries for one or more questions, the whole questionnaire would be discarded as it was not possible to trace the anonymous respondents for any correction. For this reason, three questionnaires were discarded.

Data were analyzed using 'IBM SAS Cancorr', a powerful program. This program was used because it is recommended by both statisticians and researchers in social sciences as the most suitable for correlation analysis

(see pp. 45-7) despite its limitations (see p. 176), while other programs are only suitable for causal analysis.

Criteria to Justify Research Results

Three fundamental criteria were used here to justify research results:

1. Theoretical check

   i. Both qualitative and quantitative approaches had been used to arrive at my model. Chapter I describes in some detail the rival theories of egoism and altruism, and of Agency and Stakeholder approaches. Chapter II describes how the model was developed. The model assumes that these theories are complementary (see also p. 48).

   ii. The results of the computer analysis were in accordance with the theoretical expectations and well-known empirical facts, e.g. a positive correlation between social responsibility and stakeholder approach (see p. 149).

2. Predictive Check. If causal relationship is involved, the forecasting performance of the model is important. Since this project is about correlation and not causal relationship, this check is not important.

3. Statistical checks. These checks will be explained in some detail in the ensuing paragraphs

Means and Standard Deviations

This check provides an assessment of the homogeneity of the replies and the shape of the data distribution. The mean scores in the following table indicate the consistency of direction of the respondents' perceptions (Nachmias *et al.*, 1997:367-71). The replies to the positive scores are consistently greater than 3, and those to most of the reversed scores* are consistently smaller than 3. In other words, for these questions, the respondents generally agree to the statements. **Bold-type** figures are used to highlight the proximity in the responses as represented by the smaller standard deviation (*ibid.*, 1997:371-9).

Table 4.2 Mean and Standard Deviations

I. Behavioral Norms

(NEDs = non-executive members; NPO = nonprofit organization)

According to your perception		mean	std. Dev.
a.	ethical standards for businesses are of a lower level than NPOs	3.445	1.070
b.	morality/altruism is an important source of motive in NPOs	**4.195**	**0.774**
c.	there are clear guidelines on self-dealing/conflict of interest in your NPO	3.570	1.155

d.	collaborative partnership among NEDs and EDs is stressed	3.781	0.913
e.	NEDs' criticism of your NPO's activities is welcomed by EDs as a sign of support and enthusiasm	3.664	0.933
f.	members subordinate their own personal interests to those of NPO	3.859	0.945
g.	stewardship rather than entrepreneurship is stressed in your NPO	3.547	0.938

II. Roles (NEDs = non -executive members)

According to your perception

a.	the board as a whole is the final policy maker	4.273	0.894
b.	NEDs consider themselves in charge and hence see EDs as their assistants*	3.210	1.084
c.	NEDs closely monitor the EDs' performance	3.258	0.898
d.	board members are highly competent and know what they are doing	3.359	0.911
e.	board members' attendance records are acceptable	**3.680**	**0.773**

III. Official Responsibility

The board or its subcommittee is officially responsible for

a.	resources acquisition	3.961	0.798
b.	resources allocation	3.992	0.693
c.	resources control	**3.984**	**0.710**
d.	personnel policies	3.719	0.896
e.	appointment of senior staff	3.984	0.947
f.	arbitration and dispute resolution	3.813	0.945
g.	making and monitoring strategic plans	**4.070**	**0.701**
h.	awarding contracts	3.719	0.980
i.	determining areas and levels of service provision based on need	**3.961**	**0.757**

IV. Power Base

In your perception, the most influential members of this board derive their power from

	a. social status	3.375	1.050
b.	hierarchical authority	3.844	0.798
c.	access to financial resources	3.297	0.983

d.	intensity of commitment	3.742	0.806
e.	access to information	3.391	0.835
f.	relationship with key persons*	2.500	0.964
g.	formal higher education	3.102	0.938
h.	wide experience	3.922	0.800
i.	the prestige of their occupations*	2.367	0.802
j.	knowledge of community problems	3.625	0.832
k.	skills of analysis and persuasion	3.898	0.812
l.	friendship and networks*	**2.102**	**0.762**
m.	personal integrity	**3.953**	**0.772**

V. Actual Performance

In making decisions, the board pays especially close attention to:

a.	the technical excellence of proposals	**3.602**	**0.807**
b.	productivity issues (value for money)	**3.711**	**0.775**
c.	financial management, e.g. cashflow, solvency	3.883	0.838
d.	reducing costs, e.g. materials, overhead	3.672	0.824
e.	quality of services or products	**4.023**	**0.621**
f.	staff morale and teamwork	3.766	0.883
g.	cost-effective solutions	**3.945**	**0.746**
h.	the best interests of the community	**3.969**	**0.752**
i.	the wishes of EDs*	2.898	0.954

VI. Access to Information

According to your perception

a.	NEDs usually get the information they require from the EDs	3.625	0.851
b.	NEDs can quickly get any further relevant information they ask for	3.367	0.822
c.	Available information is both very clear and concise	3.320	0.832
d.	Available information is not misleading, giving the whole picture	3.344	0.864
e.	NEDs have full confidence in the information given them by the EDs	**3.656**	**0.726**
f.	There is considerable difficulty in getting necessary specific information*	3.383	0.973
g.	Board members are given sufficient time to read all the information	3.203	0.899

VII.	**Valuation of Performance**		
a.	members are satisfied with the NPO's performance	**3.609**	**0.766**
b.	the NPO is highly efficient and effective	3.398	0.787
c.	the product/service of the NPO meets society needs	**3.703**	**0.725**
d.	members know the strengths and weaknesses of the NPO	**3.719**	**0.773**
e.	the board has well-established methods to regulate/govern the quality/quantity of NPO's product/service	3.430	0.902
f.	the board cares for its employees	**3.680**	**0.773**
g.	the board cares for its customers and clients	**3.781**	**0.675**
h.	the board is committed to quality and continuous improvement	**3.992**	**0.682**
i.	the board is committed to staff training and development	3.586	0.918
j.	the board learns from its mistakes	3.805	0.823
k.	the board is clearly effective in its functions	3.594	0.846
VIII.	**Incentive to Participate**		
	According to your perception, a typical member participates because		
a.	her/his company has an interest in the product/service of this NPO*	2.484	0.964
b.	she/he is appointed by her/his employer/institution*	3.109	1.059
c.	it may help her/him advance in the present job*	2.836	1.002
d.	s/he wants to contribute to the work of this NPO	**3.867**	**0.644**
e.	s/he likes to meet people of her/his same social standing*	2.609	0.941
f.	s/he may acquire new knowledge or develop her/his skills*	2.344	0.917
g.	s/he is a professional/expert	3.688	0.811

n =128

Another table is prepared using the average scores collected from the EDs and NEDs as below. It can be seen that the replies and the shape of the data distribution are rather homogeneous. The three pairs of square brackets show the only cases of percentage differences between ED and NED means exceeding 9%. In other words, the respondents' perceptions are mainly consistent, irrespective of whether they are EDs or NEDs. ***Italic-type*** figures are used to highlight the greater variability of the response. In the latter cases, the respondents have more diverse opinions about the statements; or the dispersion is much greater.

Table 4.3 Means between EDs and NEDs

I. Behavioral Norms (NEDs = non -executive members; NPO = non-profit organization)

	According to your perception	ED	NED
a.	ethical standards for businesses are of a lower level than NPOs	3.566	3.360
b.	morality/altruism is an important source of motive in NPOs	4.151	4.227
c.	there are clear guidelines on self-dealing/conflict of interest in your NPO	3.811	3.400
d.	collaborative partnership among NEDs and EDs is stressed	3.906	3.693
e.	NEDs' criticism of your NPO's activities is welcomed by EDs as a sign of support and enthusiasm	3.716	3.627
f.	members subordinate their own personal interests to those of the NPO	3.924	3.813
g.	stewardship rather than entrepreneurship is stressed in your NPO	3.566	3.533

II. Roles (NEDs = non -executive members)

	According to your perception		
a.	the board as a whole is the final policy maker	4.245	4.293
b.	NEDs consider themselves in charge and hence see EDs as their assistants*	3.434	3.053
c.	NEDs closely monitor the EDs' performance	3.226	3.280
d.	board members are highly competent and know what they are doing	3.623	3.170
e.	board members' attendance records are acceptable	3.698	3.667

III. Official Responsibility

	The board or its subcommittee is officially responsible for		
a.	resources acquisition	4.057	3.893
b.	resources allocation	3.962	4.013
c.	resources control	3.943	4.013
d.	personnel policies	3.679	3.747
e.	appointment of senior staff	4.038	3.947
f.	arbitration and dispute resolution	3.962	3.707
g.	making and monitoring strategic plans	4.019	4.107
h.	awarding contracts	3.679	3.747
i.	determining areas and levels of service provision based on need	3.867	4.027

IV. Power Base

	In your perception, the most influential members of this board derive their power from		
a.	social status	3.415	3.347
b.	hierarchical authority	3.943	3.773
c.	access to financial resources	3.415	3.213
d.	intensity of commitment	3.811	3.693
e.	access to information	3.491	3.32
f.	relationship with key persons*	2.396	2.57
g.	formal higher education	3.189	3.040
h.	wide experience	3.962	3.890
i.	the prestige of their occupations*	2.321	2.400
j.	knowledge of community problems	3.623	3.627
k.	skills of analysis and persuasion	3.868	3.920
l.	friendship and networks*	2.019	2.160

m.	personal integrity	4.038	3.890
V.	**Actual Performance**		
	In making decisions, the board pays especially close attention to		
a.	the technical excellence of proposals	3.566	3.630
b.	productivity issues (value for money)	3.757	3.680
c.	financial management, e.g. cashflow, solvency	3.981	3.680
d.	reducing costs, e.g. materials, overhead	3.792	3.587
e.	quality of services or products	4.000	4.040
f.	staff morale and teamwork	3.925	3.653
g.	cost-effective solutions	4.019	3.893
h.	the best interests of the community	3.962	3.973
i.	the wishes of EDs* **[17%]**	2.584	3.120
VI.	**Access to Information**		
	According to your perception		
a.	NEDs usually get the information they require from the EDs	3.623	3.627
b.	NEDs can quickly get any further relevant information they ask for	3.491	3.280
c.	Available information is both very clear and concise [9.2%]	3.509	3.187
d.	Available information is not misleading, giving the whole picture	3.528	3.213
e.	NEDs have full confidence in the information given them by the EDs	3.792	3.560
f.	There is considerable difficulty in getting necessary specific information*	3.509	3.293
g.	Board members are given sufficient time to read all the information	3.377	3.080
VII.	**Valuation of Performance**		
a.	members are satisfied with the NPO's performance	3.754	3.507
b.	the NPO is highly efficient and effective	3.585	3.267
c.	the product/service of the NPO meets society needs	3.736	3.680
d.	members know the strengths and weaknesses of the NPO	3.411	3.653

e.	the board has well-established methods to regulate/govern the quality/quantity of NPO's product/service	3.528	3.360
f.	the board cares for its employees	3.717	3.653
g.	the board cares for its customers and clients	3.830	3.747
h.	the board is committed to quality and continuous improvement	4.132	3.893
i.	the board is committed to staff training and development [10%]	3.811	3.427
j.	the board learns from its mistakes	3.736	3.853
k.	the board is clearly effective in its functions	3.660	3.547

VIII. Incentive to Participate

According to your perception, a typical member participates because

a.	her/his company has an interest in the product/service of this NPO*	2.415	2.533
b.	s/he is appointed by her/his employer/ institution*	3.057	3.147
c.	it may help her/him advance in the present job*	2.887	2.800
d.	s/he wants to contribute to the work of this NPO	3.887	3.853
e.	s/he likes to meet people of her/his same social standing*	2.500	2.680
f.	s/he may acquire new knowledge or develop her/his skills*	2.301	2.373
g.	s/he is a professional/expert	3.717	3.667
	N =	53	75

A separate canonical analysis for each of the categories of EDs and NEDs was not carried out to compare and contrast the results because

1. the differences of the scores between the two were so small, and
2. the numbers of respondents were not large enough to enable the computer program to give a full analysis.

Correlations among the Original Variables

The correlation coefficient matrix in Table 4.4 shows the correlations among the variables within the criterion set of incentives. In constructing the composite sets, this matrix provides a useful guideline: for a variable to be included in the set, the between-variable correlation coefficient of that variable should preferably be as small as possible. If the between-variable and the between-group coefficient is greater than, say 0.30, there may be the need for the re-grouping of the variables and the composite sets, resulting in the possible elimination of one or more of the questions (see p. 158 on multi-collinearity and p. 181 on Cronbach's Alpha).

In table 4.4, the bold-type figures show that there are only three between-variable coefficients in the criterion set with values greater than 0.30.

Table 4.4 Correlations Among the Original Variables
Correlations Among the IncentA to G

	INCA	INCB	INCC	INCD	INCE	INCF	INCG
INCA	1.0000	**0.3179**	0.1971	-0.1872	0.1755	0.1931	-0.2179
INCB	0.3179	1.0000	0.2173	0.0099	0.0037	-0.1200	-0.2533
INCC	0.1971	0.2173	1.0000	0.0148	0.2989	**0.4644**	-0.1023
INCD	-0.1872	0.0099	0.0148	1.0000	-0.0992	-0.1886	0.0706
INCE	0.1755	0.0037	0.2989	-0.0992	1.0000	**0.4942**	-0.2851
INCF	0.1931	-0.1200	0.4644	-0.1886	0.4942	1.0000	-0.2461
INCG	-0.2179	-0.2533	-0.1023	0.0706	-0.2851	-0.2461	1.0000

Correlation Coefficient Matrix

The correlation coefficient matrix in the appendix shows correlations between criterion set (INCENTA to INCENTG) and the predictor sets (FIRSTSE1 to FIRSTSE7). In constructing a meaningful model, this matrix provides a useful criterion: for a variable to be included in the model, at least the absolute value of one of the between-group correlation coefficients of that variable must be greater than, say 0.30. If this criterion is not met, the variable should be disregarded as irrelevant. The table (correlations between the incentive variables and the canonical variables of the norm, responsibility, power, etc) confirms that all sets have at least one coefficient greater than 0.30 (see pp.236-260 for tables in App. III).

Canonical Correlation Analysis, Cancorr

Cancorr is a useful and powerful technique for exploring the relationships among multiple criterion and predictor variables. The technique is primarily descriptive, although it may be used for predictive purpose. It is the most generalized member of the family of multivariate statistical technique. It is directly related to principal components-type analytic models (Hair *et al.*, 1992:196). Cancorr is to multivariate multiple regression analysis as a multiple correlation is to multiple regression. The

canonical function is a multivariate statistical model that facilitates the study of the inter-relationship of two linear sets of multiple criterion and predictor variables. The sets (called canonical composites) are just the weighted sum of the many variables. Each canonical function has two separate linear composites (canonical variates), one for the criterion (dependent) variables, the other the predictor (independent) variables. The strength of the overall relationship between the two linear composites is given by the canonical correlation coefficicent (*ibid.*, 1992:194-5).

Cancorr enables the data analyst to combine into a composite measure what otherwise might be an unmanageably large number of bivariate correlations between sets of variables. It is useful for identifying overall relationships between multiple independent and dependent variables, particularly when the analyst has little *a priori* knowledge about relationships among the sets of variables. Essentially, the analyst can apply Cancorr to a set of variables, select those variables that appear to be significantly related, and run subsequent canonical correlations with the more significant variables remaining, or perform individual regressions with these variables.

The goals of Cancorr are mainly to:

1. determine the level of **statistical significance**;
2. find the **canonical correlation coefficient** that determines the magnitude of the relationships that may exist between the two sets; or conversely, determine whether two sets of variables (collected from the same participants) are independent of one another (Bernstein,1978 in Cheng, 1992);
3. identify the **redundancy measure** for the percentage of variance accounted for - it provides a summary measure of the ability of a set of predictor variables to explain variation in the criterion variables. It is the amount of variance in one set of variables that can be explained by the variance in the other set; and
4. find the **cross-canonical loadings** to explain the nature of whatever relationships exist between each set of criterion variables and each of the predictor variables, generally by measuring the relative magnitudes of the cross-canonical loadings (Hair *et al.*, 1992:196).

The test statistics for the null hypothesis, HO, can be expressed in terms of canonical correlations (Rencher, 1989:312). The null hypothesis HO can

be rejected when the canonical correlation coefficient R is significantly different from zero (*ibid.*:324).

The results obtained from Cancorr should suggest answers to questions concerning the number of ways in which the two sets of multiple variables are related, the strengths of the relationships, and the nature of the relationships so defined.

Significance Test

In Table 4.5, the output gives information on the statistical significance of the canonical correlations. When the sample size is smaller than 730 (which is 10 x (61+7) + 150) and when the population is large, say 0.1 million, and the sample size is less than 1% of the population, then the canonical analysis will tend to produce sampling error, and a high canonical correlation of the sample may not hold for the sampled population. In this research, the sample size is 128, which is more than 1% of the estimated population of less than 10 000. It can be argued that the sampling error is not significant, although the relatively small sample size implies a need for caution when interpreting the results.

In the most commonly used chi-square test (attributable to Bartlett, 1938), the lambda values show whether the squared canonical correlation

coefficients differ significantly from zero, and are a measure of the strength or the weakness of the canonical correlation. Chi-square values may then be computed from lambda for the degree of freedom and significance level. If such figures exceed values in the chi-square distribution, the association between the two variable sets may have arisen by chance and the hypothesis is recommended for rejection.

Table 4.5. Multivariate Statistics and F Approximations

S = 7 M = 26.5 N= 29

Statistics	Value	F	Num DF	Den DF	Pr > F
Wilks' Lambda	0.00150898	1.5586	427	431.1983	0.0001
Pillai Trace	3.98393384	1.4292	427	462	0.0001
Hotelling-L Trace	12.53346966	1.7108	427	408	0.0001
Rov Gr. Root	4.53764745	4.9096	61	66	0.0001

Note : F statistics for Roy Greatest Root is an upper bound

Since the degree of freedom is 427 with Pr > F = 0.0001, and since the Lambda value of 0.00150898 is significantly smaller than F =1.5586, the association between the two composite sets is not by chance. In other words, the canonical functions can safely serve as an estimation of the whole sampling frame or population.

Similarly, the Pillai's criterion and all other criterion have a significance level Pr = 0.0001, which is well below the usually pre-specified level of significance (0.05). The same conclusion can be reached with the value of Roy's greatest root, as 4.5376 is also smaller than the upper bound value of 4.9096. Using any of the four measures results in the same conclusion that the inter-correlation of the predictor composite and the criterion composite is statistically significant. Therefore, all null hypotheses can be rejected.

Notice that the Pr for the third pair of composites is 0.2661 (see p. 290), which is well above the level of significance (0.05) and may be ignored. So may the higher order pairs of composites.

Squared Canonical Correlation (SCC) Coefficient

Table 4.6 Canonical Correlation

	Canonical Correlation R	Adjusted canonical correlation	Approx. standard error	Squared canonical correlation SCC
1	0.905217	0.849120	0.016024	0.819418
2	0.854768	0.770190	0.023903	0.730628
3	0.795500	0.669638	0.032582	0.632820
4	0.757442	0.622194	0.037826	0.573718
5	0.721465	0.593130	0.042548	0.520512
6	0.649773	0.478647	0.051271	0.422205
7	0.533509	0.279105	0.063479	0.284632

This coefficient, SCC in Table 4.6, represents the proportion of variance of the predictor composite linearly shared by the corresponding criterion composite, or those of the criterion composite by the predictor composite. As an example, the SCC coefficient for the first root is 0.819418 (= 0.905217 x 0.905217) in the following table. That is to say, 81.94% of the variance in the criterion set of 'incentives' is explained by the linear relationship between the criterion and predictor composite sets.

Canonical Correlation Coefficient, R (CCC)

This CC coefficient, R above, is simply the squared root of the coefficient, SCC. It is a measure of the (linear) correlation between the criterion composite and the predictor composite sets (Rencher, 1998:312). R is usually made positive by re-aligning the directions of the variables marked with an asterisk (*) in the questionnaire (Hair *et al.*, 1992:196-7). The maximum number of canonical composites is equal to the number of the smallest data set, dependent or independent. In this case, the number is seven. The first set of the seven composites accounts for the maximum amount of the relationship (maximum inter-correlation) in the set of variables. The second set accounts for as much as possible the maximum relationship not accounted for by the first set. Successive pairs of

remaining five composites are based on the residual variances. Therefore, each of the pairs of composites is orthogonally independent of all other composites derived from the same set of data.

The first R (= 0.905217) will be the first and the largest among all coefficients in the between-group correlation coefficient matrix; and similarly, the second will be substantially larger than the next higher order canonical correlation coefficients and so on (3^{rd} to 7^{th}, see table above). An analyst is seldom interested in a complete canonical solution; rather, s/he is likely to focus on the more salient canonical correlation (i.e. the first) and the two associated composites. The subsequent pairs of canonical composites are usually ignored (Rencher, 1998:312). Since R for the first order is 0.905217, it may be hypothesized that there is a significant relationship between the criterion set and the predictor set.

The first canonical correlation coefficients, standard deviations and number of scores for three other research studies are shown below:

Can. Cor. Coef.	Std. Deviation	no of sets	Source
0.582	0.116	9	Ford, 1990
0.735	0.0774	10	Pang, 1984
0.908	0.0336	13	Cheng, 1992
0.905	**0.016**	**7**	**this research**

Redundancy Analysis

Canonical and squared canonical correlation coefficients represent variance shared by the two linear composites of the variable sets, not the original variables themselves. Thus a relatively strong canonical correlation may be obtained between the two composites, even though the composites may not extract significant proportions of variance from their respective original sets.

Redundancy analysis in Tables 4.7 & 4.8 yields indices which are a good measure of the proportion of variance of one composite set that is accounted for by the other set (Steward & Love and Miller in Hair *et al.*, 1992:331).

Redundancy analysis may therefore be said to concern with 'how knowledge

Table 4.7 Canonical Redundancy Analysis

Standardized Variance of the Incentives Explained by

	Their canonical	own variables		The Canonical	opposite variables

	Proportion	Cumulative proportion	Canonical R-squared	Proportion	Cumulative proportion
1	0.1399	0.1399	0.8194	0.1146	0.1146
2	0.1646	0.3045	0.7306	0.1203	0.2349
3	0.2157	0.5203	0.6328	0.1365	0.3714
4	0.1313	0.6509	0.5737	0.0753	0.4468
5	0.1068	0.7584	0.5205	0.0556	0.5024
6	0.1214	0.8798	0.4222	0.0512	0.5536
7	0.1202	1.0000	0.2846	0.0342	**0.5878**

Table 4.8 Canonical Redundancy Analysis

Standardized Variance of the norm, resp, power, etc.
Explained by

	Their canonical	Own Variables		The Canonical	opposite variables
	Proportion	Cumulative proportion	Canonical R-squared	Proportion	Cumulative proportion
1	0.0418	0.0418	0.8194	0.0343	0.0343
2	0.0202	0.0620	0.7306	0.0147	0.0490
3	0.0311	0.0931	0.6328	0.0197	0.0687
4	0.0165	0.1096	0.5737	0.0095	0.0782
5	0.0154	0.1250	0.5205	0.0080	0.0862
6	0.0239	0.1489	0.4222	0.0101	0.0963
7	0.0179	0.1667	0.2846	0.0051	**0.1013**

of X (predictor set) reduces the uncertainty about Y (criterion set), and vice versa." (Bernstein, 1988 in Cheng, 1992).

The cumulative proportion of standardized variance of the criterion set explained by the predictor set is 0.5878. Compared with the author's earlier research results of 0.4531 (Cheng, 1992) and Ford's (1990) average of 0.13, the proportion of variance in the criterion set accounted by the predictor set is very high. In other words, the knowledge of norm,

roles etc will greatly contribute to the certainty about the incentives of the directors.

Table 4.7.a Comparison of cumulative proportion explained by predictor set

Ford 1990	Cheng, 1992	This research
0.1568	0.3881	**0.5878**
0.1580	0.4264	
	0.3061	
	0.3789	

Table 4.8a Comparison with past research studies of cumulative proportion explained by criterion set

Ford 1990	Cheng, 1992	This research
0.1287	0.4531	**0.1013**
0.1348	0.4755	
	0.3582	
	0.3614	

In Table 4.8, the cumulative proportion of standardized variance of the predictor set explained by the criterion set is only 0.1013. Compared with the author's earlier research results of 0.4513 (Cheng, 1992) and 0.1348 (Ford, 1990), this means that the knowledge of criterion set does not reduce the uncertainty about the predictor set, or the first hypothesis, HO1, needs to be revised.

Rencher (1998) argues that the total redundancy is not a useful multivariate measure of association, because it is equal to an average squared multiple correlation, and because the canonical correlation itself

is already a good measure.

Cross-Canonical Loadings or Structures

The canonical variates are interpreted on the basis of a set of coefficients, usually referred to as canonical loadings/structures. These coefficients reflect the direct contribution of each of the original variables in the set to the set's composite. The larger the coefficient, the more important it is in deriving the canonical variates. Therefore, they can be interpreted in assessing the relative contribution of each variable to each canonical function.

This seems an obvious suggestion but can be misleading and dangerous (Hair *et al.*, 1992:328). The most crucial question here is multi-collinearity, or the condition of inter-correlated predictors, which implies that the confidence intervals around the coefficient will be broad, and that one variable may hide or suppress the importance of another variable correlated with the first. When two variables are closely correlated with each other, then once one of the two has made its contribution to the composite, the other has no additional autonomous contribution to make. The coefficient of the first variables will be high, and the second one will be nearly zero, i.e. suppressed by the first.

Cross-canonical loadings are the linear correlations between each of the original observed dependent variables directly with the respective independent variables. Their magnitudes are indicative of the relative contribution of the original variables. These coefficients only appear when the correlations between the pair of composites are significant (Hair, *et al.*). They therefore provide a more direct measure of the dependent-independent variable relationships by eliminating an intermediate step of using just the canonical loadings. Like signs indicate a direct relationship, and opposite signs an inverse one.

Table 4.9 Cross-Canonical Structure

Incentiv	Norm	Roles	Resp'ty	Power	Perf.	Inform	Valua-n
C. Inc.*	-0.1690	0.1325	**0.6355**	0.1452	0.3523	-0.0357	-0.0838
Appt*	-0.2543	0.2044	0.2495	**-0.4300**	0.2576	-0.0074	0.2997
Career*	0.1802	**-0.5190**	0.3645	0.1065	0.0492	0.0635	**0.3146**
Contrib	**0.7309**	0.2209	0.0351	-0.2471	-0.0392	0.2679	0.0000
Social*	0.2793	-0.3923	0.2105	-0.1625	0.1104	**-0.4776**	-0.0642
Develo*	-0.102	-0.3601	**0.5078**	0.0113	**-0.4097**	-0.1966	-0.0141
Prof.*	0.2535	**0.4254**	-0.2308	**0.4717**	-0.1216	-0.1218	0.1984

In Table 4.9 above, for incentive A, the cross-canonical loading for responsibility is 0.6355, a very high correlation with the criterion variable, incentive A. Its squared is the percentage (40.39%) of the variance of the criterion variable, incentive A, explained by responsibility.

These coefficients should be used as a guide to the relative importance of individual dependent variables only when collinearity is minimal. They should also be interpreted only in the context of the other variables in the equation; because when a new predictor variable is added to the equation, then the coefficients will be changed. In addition, the range in which the sample data are collected may affect the coefficients. They are also subject to considerable variability from one sample to another as a result of chance or extraneous factors. In other words, they are sample-specific (Hair *et al.*, 1992:197).

The most important coefficients in each row and column are given in bold-type face. Other than canonical loadings, canonical weights may also be used, but canonical loadings are considered relatively more valid than weights as a means of interpreting the nature of canonical relationships, because canonical weights are derived to maximize the correlation between linear composites, not the variance extracted. The magnitudes of these weights reflect the relative contribution of each variable in the set to the variables in the criterion set. If the weight of say X_3 is the largest in comparison to other X, then X_3 is a significant predictor contributing to the criterion. In other words, the variable having relatively smallest

weight may be neglected for that particular criterion. Variables with negative signs exhibit an inverse relationship with those with positive signs, and those with the same sign exhibit a direct relationship.

Weights should also be used as a guide for interpreting the relative importance or contribution of a dependent variable only when collinearity is minimal. Such use is subject to the criticism that a small weight can mean either that its corresponding variable is irrelevant in determining a relationship, or that it has been partialed out of the relationship because of a high degree of multi-collinearity. Another problem is that these weights are also subject to considerable instability (variability) from one sample to another, because the procedure yields weights that maximize the canonical correlation for a particular sample of observed dependent and independent variable sets. Hence weights should be used with caution (Rencher, 1998:320).

Regression Analysis

Despite the arguments put forward in the previous paragraph, individual regression analysis for the seven hypotheses was carried out. It should be pointed out again that for those statements that are considered to be not consistent within the same group of variables (marked with an asterisk),

their scores have been reversed to provide 'internal (i.e. for n = 1 or for the same respondent') consistency of direction for each set. For example, for five incentives (a, b, c, e and f) that are considered to be egoistic and not altruistic, the scores are reversed to bring them in line with the altruist incentive (d) of 'contribution to the NPO'. Another more obvious example would be the question on information f, 'there is considerable difficulty in getting necessary specific information*'. If the score from a certain respondent for it is '2 for disagree', the score has to be reversed to become '4', so as to be consistent with the scores of '4 for agree' given by the same respondent to the other remaining questions on information: viz. NEDs usually get the information they require; NEDs can quickly get any further relevant information they ask for; available information is both very clear, concise, not misleading, and giving the whole picture; NEDs have full confidence in the information given them by the EDs; and board members are given sufficient time to read all the information.

The second important point to remember is that: in a regression analysis involving just one dependent variable and several independent variables, there is only the need to look at the weights of the independent variable for estimating the relative importance of each of the independent variables

with respect to causation. However, in a multivariate analysis, the weights of the two composites of dependent and independent variables (called the criterion and predictor sets) will have to be examined thus: first, the magnitude of the weight (coefficient) of each of the dependent variables shows its relative importance to the directors' internal motivation.to behave ethically. Secondly, the magnitude of the weight of each of the independent variables shows its relative importance within the composite of the independent variables. Thirdly, the weight of the independent variable shows its influence on the dependent variables collectively. Lastly, the greater the weight of the independent variable, the greater is its influence on those dependent variables with greater weights.

The third point to note is that: if these weights from the regression analysis (for n = 128) turn out to be negative, the weights can be interpreted as having a negative or adverse effect on the two composites of variables in contrast to those that are positive.

With the above three points in mind (see p. 190 on comments on the probability for the large canonical correlations and eigenvalues), the results of ther regression analysis may now be presented below.

Regression analysis for HO1 f(incentive) = f (norms)

Canonical correlation = 0.481483
Pr = 0.0053

Eigenvalue = 0.3018

Standardized coefficients – the weights attached to each of the variables in the regression equation

		Incentive 1		Norms 1
Incentive a*	own company interest	-0.0388	Norm a	0.5396
Incentive b*	own company appointment	0.3101	Norm b	0.3599
Incentive c*	own career advancement	-0.3905	Norm c	-0.0994
Incentive d	contribution to NPO	0.9156	Norm d	-0.4199
Incentive e*	socializing	0.1504	Norm e	0.6749
Incentive f*	acquire knowledge/skill	0.0128	Norm f	-0.3282
Incentive g	professionalism	0.0968	Norm g	0.2110

Norm a ethical standards for businesses are of a lower level than NPOs
Norm b Morality/altruism is an important source of motive in NPOs
Norm c there are clear guidelines on self-dealing/conflict of interest in your NPO
Norm d Collaborative partnership among NEDs and EDs is stressed
Norm e NEDs' criticism of your NPO's activities is welcomed by EDs as a sign of support and enthusiasm
Norm f Members subordinate their own personal interests to those of NPO
Norm g Stewardship rather than entrepreneurship is stressed in your NPO

The result is significant at Pr = 0.0053. However, the canonical correlation is only 0.4814. Together with the eigenvalue, the results show that behavioral norms are meaningful independent variables; they account for 3% of the variance in directors' internal motivation to behave responsibly. In the regression analysis, the magnitudes of the coefficients (or weights)

for the independent variables show that the perception of high ethical standards, Norm a, and critical self-evaluation, Norm e, are important factors to behavioral norms for ethical behaviour; while stressed collaborative partnership, Norm d, may have an adverse effect on directors' ethical behaviour.

As regards weights (coefficients) for the dependent variables, directors who want to contribute to the work of this NPO, Incentive d, tend to be substantially influenced by behavioral norms; while directors who participate voluntarily, Incentive b, are also influenced by the behavioral norms, albeit to a lesser extent.

A negative sign before Incentive c shows probable behaviour against SHT; it means that directors who do not care for career advancement may be inclined not to conform to the NPO's behavioral norms to socially responsible behaviour.

Regression analysis for HO2 f(incentive) = f (roles)

Canonical correlation	= 0.439603
Pr	= 0.0130
Eigenvalue	= 0.2395

Standardized coefficient - the weights attached to each of the variables in the regression equation

	Incentive 1		Roles 1
Incentive a* own company interest	-0.0464	Roles a	0.4737
Incentive b* company appointment	-0.3552	Roles b	0.0042
Incentive c* own career advancement	0.4261	Roles c	-0.0769
Incentive d contribution to NPO	0.8418	Roles d	0.4488
Incentive e* socializing	0.0522	Roles e	0.5656
Incentive f* acquire knowledge/skill	-0.3427		
Incentive g professionalism	-0.2439		

Roles a.	the board as a whole is the final policy maker
Roles b.	NEDs consider themselves in charge and hence see EDs as their assistants*
Roles c.	NEDs closely monitor the EDs' performance
Roles d.	board members are highly competent and know what they are doing
Roles e.	board members' attendance records are acceptable

The result is significant at Pr = 0.0130. However, the canonical correlation is only 0.4396. Together with the eigenvalue, the results show that the perceived roles are meaningful independent variables; they account for 2.4% of the variance in directors' internal motivation to behave responsibly.

In the regression analysis, the coefficients for the independent variables show that the directors' roles as policy makers, their competence and diligence in attending meetings, Roles a, d and e, are important factors to perceived roles for directors' ethical behaviour; while the supervisory and monitoring roles of the NEDs over the EDs, Roles b and c, only have very weak effect on directors' ethical behaviour.

As regards the weights for directors incentives, directors who want to contribute to the work of this NPO, Incentive d, tend to be substantially influenced by their perceived roles; while, to a lesser extent, directors who care more about their employer/institution, Incentive b, are also influenced by perceived roles.

The result is significant at Pr = 0.0501. However, the canonical correlation is only 0.4689. Together with the eigenvalue, the results show that official responsibilities are meaningful independent variables; they account for 2.8% of the variance in directors' internal motivation to behave responsibly.

Regression analysis for HO3 f(incentive) = f (responsibilities)

Canonical correlation = 0.468944

Pr = 0.0501

Eigenvalue = 0.2819

Standardized coefficient - the weights attached to each of the variables in the regression equation

	Incentive 1		Respon 1
Incentive a* own company interest	-0.9477	Respon a	0.5862
Incentive b* own company appointment	0.1458	Respon b	-0.0435
Incentive c* own career advancement	-0.0177	Respon c	0.4248
Incentive d contribution to NPO	0.1238	Respon d	-0.5904
Incentive e* socializing	0.3315	Respon e	-0.0309
Incentive f* acquire knowledge/skill	-0.1228	Respon f	0.4619

Incentive g professionalism	-0.4264	Respon g	-0.1363
		Respon h	-0.5360
		Respon i	0.3723

Responsibility a. resources acquisition
Responsibility b. resources allocation
Responsibility c. resources control
Responsibility d. personnel policies
Responsibility e. appointment of senior staff
Responsibility f. arbitration and dispute resolution
Responsibility g. making and monitoring strategic plans
Responsibility h awarding contracts
Responsibility i. Determining areas and levels of service provision based on need

In the regression analysis, the weights for the independent variables show that the control of resources, Resp c, and the resolution of disputes, Resp f, are perceived as important factors to social responsibility; while personnel policies and contract administration, Resp d and h, may been seen as having an adverse effect on directors' ethical behaviour.

As regards the weights attached to each of the dependent variables, directors who do not have an interest in the product/service of the NPO, Incentive a, tend not (reflecting the negative values of the weights) to pay much attention to their overall responsibilities of control and allocation of resources, while those who are conscious of their social standing, Incentive e, and those who are professionals/experts, Incentive g, do. For the other directors, with Incentives b, c, d & f, the magnitudes of the

weights (less than 0.34) show that these directors are comparatively less influenced by the perception of their official responsibility.

Regression analysis for HO4 f(incentive) = f (power)

Canonical correlation = 0.560822
Pr = 0.0003
Eigenvalue = 0.4588

Standardized coefficients - the weights attached to each of the variables in the regression equation

		Incentive 1		Power 1
Incentive a*	own company interest	-0.2973	Power a	0.0846
Incentive b*	own company appoint't	0.0783	Power b	0.3450
Incentive c*	own career advancement	-0.4531	Power c	0.5001
Incentive d	contribution to NPO	-0.0695	Power d	0.1191
Incentive e*	socializing	0.0562	Power e	0.0406
Incentive f*	acquire knowledge/skill	-0.4137	Power f	0.2400
Incentive g	professionalism	0.4275	Power g	0.1176
			Power h	-0.4652
			Power I	0.0741
			Power j	0.6277
			Power k	0.0169
			Power l	-0.1756
			Power m	-0.0528

Power a.	social status
Power b.	hierarchical authority
Power c.	access to financial resources
Power d.	intensity of commitment
Power e.	access to information
Power f.	relationship with key persons*
Power g.	formal higher education
Power h.	wide experience
Power i.	the prestige of their occupations*
Power j.	knowledge of community problems
Power k.	skills of analysis and persuasion
Power l.	friendship and networks*

Power m.	personal integrity

The result is significant at Pr = 0.0003. The canonical correlation is as high as 0.5608. Together with the eigenvalue, the results show that power bases are meaningful independent variables; they account for 4.6% of the variance in directors' internal motivation to behave responsibly.

In the regression analysis, the coefficients for the independent variables show that access to financial resources, Power c, and the knowledge of community problems, Power j, are important sources of intrinsic motivation; while wide experience, Power h, may weaken director's internal motivation possibly through learned helplessness in bureaucratic NPOs.

As regards the weights for the dependent variables, directors who are experts, Incentive g, tend to be influenced by power; while directors who care more about their career, Incentive c, and self-development, Incentive f, are also (weights are negative but scores are reversed) under the influence of their perception of other directors' power base; in other words, directors' power can be used to influence these directors towards socially responsible behaviour. Directors with other incentives (the absolute values of whose coefficients are less than 0.3) are comparatively least

affected by power base than by the other six groups of independent variables.

Regression analysis for HO5 f(incentive) = f (performance)

Canonical correlation = 0.511550
Pr = 0.0058
Eigenvalue = 0.3544

Standardized coefficients - the weights attached to each of the variables in the regression equation

		Incentive 1		Perf'ce1
Incentive a*	own company interest	-0.0671	Perf'ce a	0.2465
Incentive b*	own company appointment	0.0187	Perf'ce b	0.3793
Incentive c*	own career advancement	-0.1905	Perf'ce c	0.3891
Incentive d	contribution to NPO	0.5809	Perf'ce d	-0.0907
Incentive e*	socializing	-0.3035	Perf'ce e	-0.1512
Incentive f*	acquire knowledge/skill	0.0075	Perf'ce f	0.1031
Incentive g	professionalism	0.5289	Perf'ce g	0.0744
			Perf'ce h	-0.0046
			Perf'ce I	-0.5291

a. the technical excellence of proposals
b. productivity issues (value for money)
c. financial management, e.g. cashflow, solvency
d. reducing costs, e.g. materials, overhead
e. quality of services or products
f. staff morale and teamwork
g. cost-effective solutions
h. the best interests of the community
i. the wishes of EDs*

The result is significant at Pr = 0.0058. The canonical correlation is 0.5115. Together with the eigenvalue, the results show that actual

performance indicators are meaningful independent variables; they account for 3.5% of the variance in directors' internal motivation to behave responsibly.

In the regression analysis, the magnitudes of the coefficients for the independent variables show that perceived attention to value for money, financial management and technical excellence, Perf. b, c and a, are associated with high intrinsic motivation, and preoccupation with the wishes of EDs, Perf. J (reversed score item), is also associated with high intrinsic motivation.

As regards the magnitudes of the coefficients for the dependent variables, the commitment to contribute, Incentive d, and the directors' professionalism are important factors that are influenced by the level of attention to performance.

Regression analysis for HO6 f(incentive) = f (information)

Canonical correlation = 0.439960
Pr = 0.1334
Eigenvalue = 0.2400

Standardized coefficients - the weights attached to each of the variables in the regression equation

	Incentive 1		Inform'n1
Incentive a* own company interest	-0.4187	Information a	-0.4154
Incentive b* own company appoint't	-0.2262	Information b	0.0250

Incentive c* own career advancement	-0.0577	Information c	-0.2889
Incentive d contribution to NPO	0.7021	Information d	0.0363
Incentive e* socializing	0.5087	Information e	0.5056
Incentive f* knowledge/skill	0.0312	Information f	0.0668
Incentive g professionalism	-0.0769	Information g	0.8366

a. NEDs usually get the information they require from the EDs
b. NEDs can quickly get any further relevant information they ask for
c. Available information is both very clear and concise
d. Available information is not misleading, giving the whole picture
e. NEDs have full confidence in the information given them by the EDs
f. There is considerable difficulty in getting necessary specific information*
g. Board members are given sufficient time to read all the information

The result is significant only at Pr = 0.1334. Also, the canonical correlation is only 0.4399. Together with the eigenvalue, the results show that information will have a positive impact on social behavioral; the independent variables under information account for 2.4% of the variance in directors' internal motivation to behave responsibly.

In the regression analysis, the coefficients for the independent variables show that sufficient time to read information and confidence in the information given, Inform g and e, are essential and conducive to ethical motivation; while incomplete and unclear information, inform a and c, does not deter directors' internal motivation.

As regards the dependent variables, timely, accurate, reliable and comprehensive information etc. have the greatest influence on directors who want to contribute to the work of this NPO (Incentive d), who buy the

product/service of the NPO (incentive a, with negative weight but reversed score), and are not driven by desire to be with their peers (reversed score item e).

Regression analysis for HO7 f(incentive) = f (value)

Canonical correlation = 0.619100
Pr = 0.0035
Eigenvalue = 0.6215

Standardized coefficients - the weights attached to each of the variables in the regression equation

	Incentive 1		Value 1
Incentive a* own company interest	-0.0541	Value a	-0.0437
Incentive b* own company appointment	-0.3969	Value b	0.0979
Incentive c* own career advancement	0.4147	Value c	-0.0725
Incentive d contribution to NPO	0.7253	Value d	-0.0531
Incentive e* socializing	0.3384	Value e	-0.4548
Incentive f* knowledge/skill	-0.5444	Value f	0.4959
Incentive g professionalism	0.0870	Value g	0.1609
		Value h	0.2744
		Value I	0.2271
		Value j	-0.0848
		Value k	0.4864

Evaluation a. members are satisfied with the NPO's performance
Evaluation b. the NPO is highly efficient and effective
Evaluation c. the product/service of the NPO meets society needs
Evaluation d. members know the strengths and weaknesses of the NPO
Evaluation e. the board has well-established methods to regulate/govern the quality/quantity of NPO's product/service
Evaluation f. the board cares for its employees
Evaluation g. the board cares for its customers and clients
Evaluation h. the board is committed to quality and continuous improvement
Evaluation i. The board is committed to staff training and development
Evaluation j. the board learns from its mistakes

Evaluation k. the board is clearly effective in its functions

The result is significant at Pr = 0.0035. The canonical correlation is as high as 0.6191. Together with the eigenvalue, the results show that processes of evaluation of performance are the most important independent variables; they account for 6.2% of the variance in directors' internal motivation to behave responsibly.

In the regression analysis, the coefficients for the independent variables show that care of its employees and an effective board, Values f and k, important factors in ethical motivation. The strong emphasis on the established methods to regulate/govern the quality/quantity of the NPO's product/service, having a negative value for its weight, may appear to pressure the directors to perform less ethically; while other economic performance indicators are of lesser significance with their values relatively smaller.

As regards the dependent variables, the evaluation of performance tends to exert greatest influence on directors who want to contribute to the work of this NPO, Incentive d (its weight is the greatest), rather than on directors whose companies have an interest in the NPOs' product/service, or who are professionals and experts (their weights are smaller). The

negative weights for reversed score items, incentives b and f suggest that in this case, there is no adverse impact on the directors' incentives from directors being appointed by their organizations, or being concerned to develop their knowledge and skills. The negative weights may mean that these two types of directors will not tend to be egoistic in the evaluation of their performance. There is still a very high overall correlation (=0.619) between the evaluation of performance and directors' ethical behaviour.

Collective Regression analysis for
f(incentive) = f (norm) + f(resp.) + f(power) etc

Canonical correlation = 0.905217
Pr = 0.0001
Eigenvalue = 4.5376

Standardized coefficients - the weights attached to each of the variables in the regression equation

	Incentive 1		Norm1
Incentive a	0.0242	Norm a	0.2566
Incentive b	-0.2948	Norm b	-0.1449
Incentive c	0.2074	Norm c	0.1736
Incentive d	0.8091	Norm d	-0.0423
Incentive e	0.4838	Norm e	-0.0883
Incentive f	-0.1674	Norm f	0.1180
Incentive g	0.2714	Norm g	0.1567
			Roles 1
		Roles a	0.1240
		Roles b	0.0502
		Roles c	-0.0259
		Roles d	0.0259
		Roles e	0.1843

			Respon 1
		Respon a	-0.0159
		Respon b	0.1802
		Respon c	-0.0328
		Respon d	-0.0487
		Respon e	-0.1563
		Respon f	-0.1616
		Respon g	-0.0352
		Respon h	0.0651
		Respon I	0.0780
			Power 1
		Power a	0.1037
		Power b	-0.1173
		Power c	-0.0925
		Power d	0.0810
		Power e	0.4156
		Power f	0.4963
		Power g	-0.1028
		Power h	0.0025
		Power I	-0.1767
		Power j	-0.0587
		Power k	-0.2966
		Power l	-0.2960
		Power m	-0.1327
			Performance 1
		Performance a	0.1897
		Performance b	0.2292
		Performance c	0.1107
		Performance d	-0.3995
		Performance e	-0.1530
		Performance f	-0.3046
		Performance g	0.1202
		Performance h	0.2048
		Performance I	0.0154
			Information 1
		Information a	-0.0301
		Information b	-0.0071
		Information c	0.0053
		Information d	-0.1882
		Information e	0.0759
		Information f	-0.0597

		Information g	0.0677
			Value 1
		Value a	-0.0402
		Value b	-0.1050
		Value c	-0.1819
		Value d	0.0237
		Value e	-0.3076
		Value f	0.4426
		Value g	-0.0564
		Value h	0.3692
		Value I	0.1632
		Value j	-0.1409
		Value k	0.5112

Sum of the eigenvalues from the seven individual regression analyses

$= 0.3018 + 0.2395 + 0.2819 + 0.4588 + 0.3544 + 0.6215$
$= 2.4979$

The result of the collective regression analysis on the two composites is significant at Pr = 0.0001. The canonical correlation is as high as 0.9052. While the sum of individual eigenvalues can explain only 24.98% of the variance of directors' internal motivation, the composite eigenvalues can explain 45.376% of the variance. This means that the aggregation of the various independent variables have an additive causal effect on internal motivation.

In the regression analysis, the coefficients for the independent variables show that much importance is attached to the effectiveness of the board (weight for evaluation K = 0.5112), its care for employees (weight for evaluation f = 0.4426), directors' relationship with key persons (weight

for power f = 0.4963), their access to information (weight for power e = 0.4156)-and their commitment to quality and continuous improvement (weight for evaluation h = 0.3692). Weights for the other independent variables are either smaller than +0.30 or negative, indicating their minor or adverse influence to directors' ethical behaviour.

As regards the dependent variables, directors who want to contribute to the NPO, incentive d (weight = 0.8091) are highly influenced by the predictor set of independent variables. The extent to which directors who are interested in their social status, Incentive e, (weight = 0.4838) is also highly influenced by the predictor set; while the other directors' motivations (with weights > 0.30 or negative) are relatively not influenced by organizational factors.

Limitations of Canonical Correlation Analysis (Cancorr)

Both statisticians and researchers in social sciences have recommended Cancorr as the most suitable statistical tool for exploring the relationships among multiple variables (see pp. 45-7) amongst other programs that are suitable only for causal analysis. Cancorr is the most generalized member of the family of multivariate statistical tools. However, despite the many

advantages of the Cancorr analysis, some basic assumptions made in by Cancorr analyses do have their limitations as follows:

1. Cancorr aims at testing the two composite sets collectively, and not individually. Therefore it may be said to lack the rigour of other multivariate tests unless separate regression analyses are performed as the author has done.
2. Cancorr only tests the correlation among the original variables; it does not perform a test to show that the data groups are relevant and sufficient data. The author therefore had to perform a Cronbach's Alpha Reliability Analysis.
3. all predictors are perfectly reliable,
4. the predictors are also linearly independent, as shown in the correlation matrix. The inclusion of a variable that is highly related to or correlated with an included variable leads to collinearity. The omission of an independent variable also leads to error. The combined effect of all included/excluded variables is called an '**error in equation**'.
5. all criterion items consist of systematic components perfectly related to the predictors and a residual component which is

totally unrelated to the predictors,

6. the residual is purely random, and
7. the degree of inter-correlation (multi-collinearity) is low.

Multi-collinearity arises when the independent variables are correlated and difficult to separate their individual effect.

The combined effect resulting from the measuring processes 1 and 2 above is called the '**errors in variables** (Bernstein, 1978)'.

Other inherent possible errors are due to misapplications:

1. sampling errors. The returns are not representative, e.g. non-respondents are not counted; or the sample size is not great enough (e.g. smaller than 20%) to ensure cross-validation (Weiss, 1972; Barcikowski and Steven, 1975; Thorndike *et al.*, 1973, 1983 in Hair *et al.*, 1998).

   In the first case, follow-up letters can improve the response rate, but the quality of the response is still doubtful because reluctant respondents may be just giving some *ad hoc* answers. A test for poorly completed questionnaire is respondent's 'consistently repeating the same answer' despite the reversal of the questions. The author has therefore adopted the

recommendation not to include low quality responses in the analysis (Hair *et al.*, 1998). In the second case, if the ratio of sample size to population is smaller than, say 1% (possible if for the population is demographic), then:

a. the estimates of the canonical correlation coefficients and redundancies will be biased, and

b. the model will be vulnerable to sample-specific variations and co-variations.

Since in this research study, the ratio is much greater than 1%, the hypotheses could, subject to the further points below, be accepted together with its external validity. But Mintzberg (1983) even disagrees with the argument that a small sample size is difficult to generalize.

2. Errors may arise due to faulty interview, questionnaire design or statistical techniques. Here the questionnaire had been tested twice; and Cancorr or correlations had been shown to be useful in phenomenological approach (see pp. 57-9).

3. the values of canonical weights used in computing the composites are subject to considerable instability from sample

to sample. Instability occurs because the computational procedure yields weights that are maximally correlated with the composite for that particular sample. It was recommended to use only the canonical correlation coefficients and ignore the weights.

I wish to re-emphasize that:

1. Cancorr only reflects the variance shared by the linear composites of the sets of variables, not the variance extracted from the variables;

2. It is difficult to identity meaningful relationships between the subsets of the predictor and criterion sets because precise statistics have not yet been developed to interpret canonical analysis, and we must rely on measures such as loadings or cross-loadings.

3. Since Cancorr places the fewest restrictions on the types of data on which it operates, it must only be used for testing relationships and not for other purposes.

Lamber and Durand (1975 in Cheng, 1992) sum up the limitations of Cancorr in one sentence:

> "*[it] provides researchers with a tool for consolidating into a composite measure what otherwise might be an imponderable number of bivariate correlations between sets of variables: the technique is particularly useful when testing relationship*"

In my opinion, the limitations of Cancorr should nonetheless not diminish the contribution of the model that I have developed of social responsibility motivation among NPO board members.

Cronbach's Alpha Test

Both Cancorr and Cronbach's Alpha test produce correlation matrix tables. The emphasis with Cancorr is that each variable should be investigated as a distinct variable *independent* from the other variables. Cancorr helps to detect whether the researcher has simply repeated the same question in another form; or collect the same variable in the same analysis more than once. But unfortunately, Cancorr does not tell whether these variables included are relevant to the issue under investigation – i.e. whether *irrelevant* data that do not contribute to the analysis have been collected and analyzed and whether *sufficient* data have been collected. Therefore, I also used the Cronbach's alpha test as a reliability measure. The full computer printout for the Cronbach's alpha test is in App. IV, p. 303.

The extract of standard alpha values for the eight groups of variables is summarized below.

Table 4.10 Cronbach's Alpha

	Variables	Alpha	Std. Alpha	
Norm	7	0.5937	0.6072	
Roles	5	0.1958	0.2584	
Responsibility	9	0.8495	0.8531	
Power base	13	0.4144	0.4332	
Performance	9	0.7305	0.7515	
Information	7	0.8147	0.8209	
Evaluation	11	0.8559	0.8569	
Incentive	7	0.2952	0.2070	

It can be seen that three of the eight standard alpha values are greater than 0.8, one is greater than 0.7, and one is nearly 0.6; only values for *roles*, *power base* and *incentives* are low.

However, the high canonical correlation coefficient of 0.905217 (p. 149) in Cancorr positively confirms that these 68 variables are **necessary** determinants in the model. The Cronbach's alpha values identify that five groups are reliably clustered, but for the purpose of positivism, the five determinants under *roles*, the thirteen under *power base* and the seven under *incentive* may not be **sufficient** to find a fixed universal law for human behaviour in question (Keim *et al* in Mitnick, 1993:126; Buchanan *et al.*, 1997:30). There may probably be other variables under these 3 constructs that need to be included in the model but have been left out in

my questionnaire.

As Cadbury (2000:7) has correctly pointed out, there may probably not be a single model that can fully describe governance, let alone a model of using the concepts in SHT, given the complexity revealed when adopting a phenomenological approach (Buchanan *et al.*, 1997:30). A model is inevitably a simplified version of reality, and even as many as 68 determinants still cannot include all the contextual factors (Hayes, 1996:123). Some of the variables applicable might have been left out, particularly in the three groups identified by low Cronbach's alpha scores (Mahon & Mitnick in Mitnick, 1993:191 & 248; Cornforth *et al.*, 1999:346 & 360). Since the model is not concerned with prediction and control, the omission should not affect the results from Cancorr, which (as explained in Chapters IV and V) has unequivocally shown that the clear understanding of the 68 social and organizational determinants point the way to higher intrinsic motivations, and in NPOs, a more effective board. Therefore, while taking the Cronbach's alpha findings into account, it may still be safely argued, from findings reported above and the recent developments in ethical reasoning models by other scholars (see p. 203), that nonprofit governance must definitely make a paradigm shift towards

the balance of powers between shareholders, board members, executive directors, and stakeholders or regulatory forces (Cadbury, 2000:8). It may be of interest to not that the use of Principal Components for economic forecasting also allows for the inclusion of necessary and not sufficient variables in their equations, e.g. the High Frequency Econometric Model developed by the University of Hong Kong in 2000.

Chapter V CONCLUSION

Overview

In this chapter, I shall draw my conclusions from findings as detailed in Chapter IV, using the statistical analysis and hypothesis tests to support my theory of ethical reasoning in nonprofit governance. I shall also discuss the main contributions made by my research studies. The adoption of my theory has its many implications, which I elaborate in the relevant section, in particular that directors are urged to strive for a balance among stakeholder interests and aim at the higher level human motivations both in themselves and stakeholders.

I am aware of the limitations of my research, and the possibility of further improvement as indicated under the subheading of 'recommendations'. It is however gratifying to note that concurrently, other scholars have developed similar models based on the application of management ethics across different types of organizations.

Conclusions from findings

Based on my theory and experience, I formulated seven hypotheses, each aiming to test for correlation between one of the seven predictor sets (the external motivations) and the criterion set (internal motivations). The

predictor sets include perceived behavioral norms, roles, power bases, official responsibilities, actual performance, access to information and evaluation of performance; and the criterion set refers to the incentives of the board members to participate in the NPOs.

In my statistical analysis, the first canonical correlation coefficient, R, is found to be 0.905217. This significant correlation at a confidence level of over 0.95% ($Pr < 0.0001$ in p. 149) **confirms** the seven hypotheses. It follows that the interactive ethical reasoning model reflects reality. In other words, the governance model to be used should include not just the lower level motivational factors, such as self-interest, but also all other constructs in my model, and should in particular be informed by the concepts of feedback and interactionism. Hence, findings support that the Stakeholder Approach should be seriously considered for applications in nonprofit governance.

In other words, good governance requires both directors and employees who are capable and who have high internal motivations. My approach with stakeholders as the focus offers the directors a firm sense of what the governing bodies should do and why (Turnbull, 1997; Francis, 2000; Williams, 2000; Vinten, 2000).

My interactive model assumes that there is more to governance than legal or economic concepts (Tricker, 2000:295); i.e. it is about relational ethics. The model implies that it is crucial for board members to adopt a multi-dimensional approach to governance (Mitnick, 1993), foster an understanding among the various stakeholder groups and inspire mutual trust (Fukuyama, 1995). It implies also that the directors, as leaders and decision-makers, should learn continuously and adapt themselves to the perceived internal and external motivational factors, and to the working relationships among themselves and the key stakeholder groups. The directors, as one of the important stakeholder groups, are influenced by the corporate climate as well as influencing it. AT suggests that directors may be influenced through control, and even through coercion or punishment, but SHT suggests that these influences should also include education, role modelling, persuasion, cooperation, sharing etc. to enhance awareness of the higher-level motivation and sensitivity to ethical issues (Snell, 1998; Maclagan, 1998).

The uni-directional correlation of predictor set with the criterion set however confirms Young's observation that in actual practice, directors in NPOs generally follow perceived norms and other organizational climate

factors (Young in Powell, 1987:37-40). Depending on the governance theory in use by the NPO explicitly or implicitly, board members with strong sense of social responsibility may or may not be practising concepts enshrined in SHT. In addition, their sensitivity to SHT is crucial for conformance to socially responsible behaviour expected of them; such as aligning the interests of various stakeholder groups in harmonious co-operation to achieve better quality, teamwork, and respect for the individuals.

It should be noted that all the constructs in the questionnaire had been re-oriented to tap into the stakeholder approach, thus the research findings identified the association of these important constructs with socially responsible direction. In other words, SHT is perceived to correlate with directors' sense of social responsibility so that, given an appropriate corporate climate, they will actively participate in the various board functions in order to achieve high economic and social performance. In such circumstances, a socially responsible and effective board has little need to resort to control, or to be subjected to control. The members would need but to develop and foster the kind of behavioral norms conducive to effectiveness and ethical conduct; clarify their own roles and official and

social responsibilities; share information; evaluate actual performance against targets; and balance powers of, and goals for, multiple stakeholders. It follows, in practical terms, that directors should communicate effectively and share information openly, in order to arrive at reasonable decisions. The findings imply that in order to improve board performance, the NPO is advised to consider 68 variables covered in the questionnaire, along with other ones, such as board composition, duties and accountability (not included in the model). If directors are aware of ethics-oriented theories alternative to that of AT, and draw on these to motivate other people and to express their social responsibility/ accountability, then they can aim to be transformational leaders (see Burn, 1978; Bass, 1996 & IEM'98) practising participative management, empowerment, and education through their own moral leadership, augmented by ethical programmes.

The individual results of regression analysis for all the seven hypotheses are significant at Pr = 0.0003 to 0.0501 with the exception of the one on 'access to information (Pr = 0.1334. Notice that the Cancorr analysis produces the smallest Pr = 0.0001). However, the greatest canonical correlation for the individual regression analysis is only 0.619100 (out of

0.481483, 0.439603, 0.468944, 0.560822, 0.511550, 0.439960 and 0.619100) as compared to that of 0.9052 in the Cancorr Analysis for the two composite sets. The sum of the eigenvalues means that the independent variables, taken individually, account for only 24.98% (2.498 = 0.3018 + 0.2395 + 0.2819 + 0.4588 + 0.3544 + 0.2400 + 0.6215) of the variance in directors' internal motivation to behave responsibly.

While the seven regression analyses suggest that each of the predictor sets influenced the criterion set; using the Cancorr Analysis, the eigenvalue of 4.5376 means that the independent variables, taken collectively, account for some 45% of the variance in directors' internal motivation to behave responsibly. It may be safely said that the various regression analyses confirm that the 61 variables appear to account for roughly a quarter individually to about one half collectively of the variance.

From a skeptical point of view, it may be argued that it is only because there are so many variables (68), and all the various combinations of them, that it is possible to obtain the high canonical correlation of 0.9052 and an eigenvalue of 4.5376. Nonetheless, as these values are statistically significant at the 0.0001 level, the probability of obtaining these values by chance is only one thousandth of a percent.

It is also worth noting that the directors' motivation to contribute to the NPO has consistently been found to be the aspect of internal motivation that is most subject to the predictors of socially responsible behaviour in five of the regression analyses (viz. internal motivation as a function of norms, roles, performance, access to information, and performance evaluation) and in the Canonical analysis.

Contributions of the Research

The aims of this research study have been achieved in the following ways:

1. My theory is a local one built specifically to explain how the concept and practice of social responsibility is learned by board members.
2. My original assumption that directors will behave according to Kant's categorical imperatives turns out to be not realistic, instead, it is more appropriate to urge directors to follow the doctrine of communitarianism, that stresses cooperative enquiry, mutual responsibility and citizen participation (Tam, 1997).
3. a combined qualitative/quantitative investigation of directors' behaviours has been completed in the local non-profit sector, where members may or may not share homogeneous

motivations; and the extent to which the perceived motivations and actual behaviours correlate has ascertained, given the variations in the independent variables of behavioral norms, roles, official responsibilities and actual performance etc.; and

4. a learning and ethical reasoning model based on more than one dimension – social responsibility in addition to economics - has been developed for the fuller understanding of nonprofit governance. The model draws attention to social performance indicators, and not only financial performance, for the healthier progress of mankind. It advocates Aristotle's ideal that true happiness only comes from doing good, and that virtue is the path to contentment.

Background

In 1984, after leaving the private sector as a director (limited partner) considerably frustrated by the profit maximization motive, I joined the nonprofit sector. I first came across literature on corporate governance in 1992. However, I was skeptical of Agency (AT) and even Stewardship Theories (SST), and was much disconcerted by the implications of psychological egoism as the sole motivation. In 1995, I commenced my research on nonprofit governance, hoping to gain more knowledge in

order to make contributions to my organization and to this important subject in management studies.

During the early years of my study, I discovered that economic models such as AT and SST provided but one perspective – economic - of the many perspectives of governance (Tricker, 2000:294). Over the past seven years, I have examined other disciplines and perspectives in building my interactive ethical reasoning model, e.g. philosophy, psychology, sociology, politics, jurisprudence and even unionism. Through these, I have drawn on concepts such as moral development, social learning theory, group dynamics, situationalism, interactionism, legitimacy, espoused theory, theory-in-practice, and cognitive dissonance, etc. These concepts form my arguments for adopting management ethics and SHT in nonprofit governance. My ethical reasoning model assumes that both social and economic performance is important.

Other Exploratory Experiences

After the preliminary literature review in research methodology, I dropped my initial proposal to use a positivist approach in favor of the more sophisticated realist and phenomenological approach (Layder,

1993), that combined qualitative and quantitative analyses, in the belief that human behaviour and interaction could only be tested using correlation analysis. This change meant repeated revision of my theory, questionnaire and data collection method, by first doing nine in-depth interviews for theory building, and then a pilot and full survey for theory testing.

To avoid bias, and to improve representativeness, stratified random sampling and mailed questionnaire to over 1000 EDs and NEDs, far more than the original planned census of 300 directors within VTC, a single NPO. While the nine interviews helped me revise my theory and questionnaire, the use of SAS Cancorr software package enabled me to study the relationship of the 68 constructs at the same time.

During the seven years of my study, I had the advantage of being the representative of the Executive Director of VTC in the various 18 Training Boards/General Committees. I could apply my ethical reasoning model with its focus on stakeholder when observer as participant in group discussion. I had used the SHT approach to persuade the business-minded non-executive directors to agree to spend considerable sums of money, often initially against their profit-making second nature, to launch new projects by VTC rather than leave them to the private sector. These new

initiatives included the Insurance Intermediate Quality Assurance Scheme with its MPF examinations; the expansion in training capacity of the Information Technology Training and Development Centre and the Financial Services Development Centre; the new Chinese Cuisine Training Institute for training Chinese chefs; the new Beauty Care Training Board with its trade testing schemes for beauticians; and the Labour Market Analysis Project for web-based surveys in future. All these projects had the aim of improving the skills and qualifications of the less academically inclined people on a non-profit making basis. Many of these projects were subsidized by government and therefore had competitive advantages over their counterparts in the private sector.

Implications of the Findings

My whole study involves the examination of nonprofit governance issues from the perspective of different disciplines and theories. It has enhanced my understanding of non-profit governance, and of the motivation and behaviour of directors in NPOs. My theory suggests that in a quality and knowledge-based society, we should embrace SHT, and strike a balance between control and empowerment, conflict and cooperation, egotism and altruism in a human interactive setting such as NPOs.

While proponents of AT assume that all humans are egotistic and require

close control; advocates of SHT try to unleash the good side of human potential through readiness to tolerate human foibles and willingness to listen to dissenting voices and be more compassionate to underlings. NPOs are established to offer a social safety net, or the training and development required to raise productivity and contributions to the organization.

The implications of my study are that SHT, Management Ethics and related concepts from other disciplines should be essential considerations in governance, corporate or nonprofit. This study is different from all previous work on management ethics because it focuses on what may often be the epicentre of the nonprofit organizations -- the governing bodies. The outcome of the study, if adopted by academicians and practitioners, will improve the working and personal lives of all stakeholders to the NPOs concerned.

The adoption of my model means a drastic change in policy and practice in order to help the organization become more socially responsible and achieve better performance. It highlights the directors' fiduciary duties to other stakeholders, but not to the exclusion of disclosure, transparency and shareholders' rights.

The findings showed unexpectedly to me that the individual members'

incentives have little to contribute to the commitment to behavioral norms, formal roles, official responsibility, power, actual performance, shared information and performance appraisal. In contrast, if behavioral norms, formal and actual roles, official responsibility and power are perceived to be clearly defined; information on actual performance or other issues is shared; and performance properly evaluated (Osborne, 1996:139-140); then the obstacles to implementing directors' governing role are removed, and the sense of social responsibility exhibited by members is strong. This suggests that leadership, an ethical training programme (McDonald *et al.*, 1999:133-46), and a more democratic and participative decision-making process that can create the so-called moral ethos are so very important (Snell, 1993).

The research findings also indicate that the directors individually are perceived to exert smaller than expected influence on the existing characteristics of the NPOs. While directors should go through an ethical programme in governance using the stakeholder approach, so must management and staff in order that there will be an organization-wide awareness of the intangible performance targets (Snell *et al.*, 1994). Lastly, there are discernable and measurable, common and relevant

characteristics of governance across the three domains of public, business and nonprofit sectors.

There may of course be difficulty in the application of my model in the real world, even in the nonprofit sector, because of ingrained organizational culture and social norms. Had it not been for the recent proliferation of debate on SHT approach (see other ethical reasoning models below), I might have been less emphatic in arguing the validity of my ethical reasoning model.

Limitations

My research study was intended to be for directors of NPOs; therefore the findings may possibly be restricted to these organizations. Other inherent limitations of my research include the complexity of the topic, the low response rate of mailed questionnaire mainly from the more public-spirited respondents, the data itself, which was directors' perceptions of other members rather than direct measurements of their behaviour, and the limitations inherent in a correlation-based computer programme as elaborated in Chapter IV.

Further limitations include:

1. the large percentage of Chinese and male respondents. Hence the conclusions drawn may be culture- and gender- specific,

2. the coverage of the sample over several categories of NPOs, each with its different characteristics (Chapt. III). Hence, the conclusions drawn while generally applicable to the third sector, may not apply to one of the categories in particular e.g. the trade union sector. There may therefore be justifications for in-depth case study of particular NPOs, examining governance dynamics in the light of their specific mission, structure, strategy and board composition, etc.
3. the questionnaire used. A piloted questionnaire had been adapted and revised to avoid double-barreled questions and yet include only the key concepts in governance (cf. 'sufficiency' in Cronbach's alpha in p.181). Even so, the number of questions was already too large for respondents to feel comfortable with. Probably, the quality of answers and the response rate might be improved if fewer questions had been used.
4. a 5-point Likert-scale was used. Although some researchers may find this a problem because of central tendency among Chinese respondents (Steven *et al.*, 1988), I consider that a six, seven or more number of point scale may not solve the problem. Forcing

choices on either side of a dichotomy may merely distort the data. In addition, any choice more than five may have adverse effects on the respondents' cooperation.

5. The conclusiveness of the research findings. The research findings are not conclusive in the sense that the in-depth interviews show respondents' tendency to give answers expected of them rather than their actual behaviour – i.e. espoused theory rather than theory-in-practice (Senge, 1993:175). The research study does show that well-intentioned directors are perceived to be influenced by the cultural characteristics of the NPOs: behavioral norms, roles, official responsibility etc. (*ibid.*:40-44).

6. The low response rate. Besides the use of methods recommended by Dillman (1978), the researcher's social status and network are important in securing a higher response rate at the apex level. A higher response rate may allow tests among the sub-groups according to sub-sector, gender and class of directorate because of their diverse structure and purpose.

Recommendations

I wish to make the following recommendations on future research design:

a. Nonprofit governance is a topic that has not been given sufficiently rigorous research attention in comparison with corporate governance in the private sector. There may be the need to re-define and re-conceptualize directors' behaviour more precisely. There may also be a need to further integrate concepts from SHT into the research of nonprofit governance, along with existing knowledge about director behaviour.

b. When studying director behaviour, one should be open-minded and not assume a causal relationship or a single theory as in positivism because of the complexity of human behaviour as explained by phenomenology. There is a myriad of governance theories and ethical principles with seemingly competing values but nonetheless worthy of studying. The directors need to understand their multiple relations with other stakeholders, and be sensitive to the multiple variables at work – 68 items in my model. In so doing, they can cascade down credibility and action to the executive arms and

employees of the NPOs.

c. In real life, some conscientious directors may genuinely (or potentially) wish to base their actions on assumptions of human nature in SHT, to be socially responsible, to practise empowerment and to achieve total quality through commitment to teamwork. In practice, the culture of their organizations often stops or discourages them from doing so. Therefore research in governance should not focus on the economic or political dimensions of organizations alone, but should also include the ethical dimension.

d. The practice of nonprofit governance aims to make a positive contribution to human welfare, therefore directors must address ethics explicitly. There is no excuse, unlike with AT in the business sector, for performance maximization through efficient use of resources at the expense of other more important human values.

e. Alternatively to a mailed questionnaire, a longitudinal case study, direct participative observation and research based on documents may be used for triangulation, for independent

confirmation and for exploration of the developmental stages of interpersonal relationship among the directors.

f. Separate research studies may need to be conducted for assessing directors' performance at different stages of group development (viz. forming, storming, norming, performing and disbanding). One could then examine governance patterns as they develop over time.

g. Instead of the SAS software package with which that I am familiar, other researchers may use other computer programs with different capabilities to cross-validate my findings.

Links with Other Ethical Reasoning Models

In concluding my thesis, I would like to mention that the view that ethics should govern commercial behaviour is not new (Tawney*, 1926 & 1952; Polanyi*, 1944; May*, 1949; Dement*, 1952 *all in Bartlett, R. 1992). In the 1950s in particular, interest in business ethics grew and both political and social theories were influenced by doctrines from ethics and religion (Tawney, 1952). Recently, in the study of organizational behaviour, McDonald *et al.* (1999) traced ethical decision-making models from Bartels (1967), to Trevino *et al.*'s multi-influence causal model based on

social learning conditions (1987), and further to Stead *et al.*'s (1990) and Fritzsche's (1991) interactionist models. McDonald *et al.* (1999) have themselves developed an integrated framework for stimulating morally responsible behaviour in organizations. All these models describe the decision-makers' set of internal motivations, when faced with elements of organizational culture, goals, ethos, tasks, and evaluations etc. McDonald *et al.* recommend the development of an effective ethics programme to promote ethical climate and behaviour in organizations (*ibid.*:145), that entails among other things the training of decision-makers, the setting up of a monitoring system and the compilation of a code of conduct.

In the domain of governance studies, Weimer *et al.* (1999:152) presents a comprehensive model for directors that contains key issues such as:

1. the concept of an effective board,
2. the directors' motivations,
3. the power structure,
4. the importance of economic performance,
5. directors' awareness of situational factors,
6. the salient stakeholders who can influence the decision-making process,

7. fair treatment of members, and

8. directors' willingness to engage in critical self-evaluation.

Gay's (1999:230) model embraces even more clearly the concept of SHT (see also Cadbury, 2000:11-12):

1. The regular evaluation of the performance of the CEO against established goals and strategies,
2. directors' understanding of the purpose of the company,
3. accountability of the board to shareholders and other stakeholders, and power to address their needs and protect their interests,
4. the broader spectrum of aims under SHT,
5. access to comprehensive non/financial information,
6. directors' personal and professional competence and their contributions and competencies; hence the process of selection (see also Brinckerhoff, 1994: 57- 9 and Nolan in Baty, 1998:6) and development of directors (Gay, 1999:231).

Gay believes in basic human values. He argues that the purpose of any organization is to serve the stakeholders, and; that there are benefits in balancing stakeholder interests, and claims that long-term shareholder

value will improve by taking a stakeholder perspective (*ibid.*233-5).

Cornforth *et al.*'s (1999:346-7 & 359-60) democratic model acknowledges pluralism and the directors' accountability to different stakeholders. Among other factors, the model stresses the social learning aspect of the SHT approach, and stresses the importance of the SHT approach in professional education and training for directors should put more emphasis. Like myself, Cornforth *et al.* (*ibid.*:347) also hypothesized that members' incentives could shape the output of the board in NPOs, viz. the cultural norms and social influences. They warn however, that much of the literature they refer to is prescriptive and idealized in nature; and not empirically grounded (*ibid.*).

Cornforth *et al.* (1999:346-7 & 359-60) also argued that there were three types of pressures facing directors:

1. coercive pressure - rules and regulations as in checks-and-balances mechanisms recommended by AT;
2. normative pressure – the wider cultural influences such as social norms and values, as in ethical reasoning models; and
3. mimetic pressure – the tendency to imitate role models, as in social learning theory.

From Cornforth *et al.* (1999), using the SHT approach, directors would become aware of the normative pressure and realize that certain basic values, such as human rights, dignity, and compassionate sense of community, are not at odds with business. Such pressure does not arise from merely fiduciary duties in contractarianism, but rather from communitarianism (Tam, 1997: Francis, 2000).

Tam (1997) defines communitarianism as 'a doctrine that charts a middle course between individualist and authoritarian organizations of society'. To this end, governing bodies should build 'inclusive communities' that promote the three communitarian principles of:

1. 'cooperative inquiry as the basis for judging the validity of arguments;
2. mutual responsibility that members of the community owe to each other; and
3. citizen participation that requires the reform of power structures to enable citizens to participate equally.'

I share Tam's (*ibid.*) view that these principles are equally applicable to ideological debate, and to reform of educational institutions, employment relations, client relations and stakeholder relations in general in the private and nonprofit sectors.

Other Recent Developments in Governance

By the time I had completed the first draft of my thesis in December 2000, the governance landscape had already changed noticeably (Tricker, 2000:292-3). Issues such as social responsibility, responsiveness, communitarianism, corporate citizenship and global ethics had become regular topics in academic journal articles and agenda items in the governing bodies of the three sectors worldwide (Drucker, 1993: Williams, 2000:381; Francis, Cadbury, and Vinten, all in 2000; Tricker, 2000:293-4; Chan, 2001). Some multi-national organizations, including Shell, Microsoft, Chase Manhattan Bank and 3M in US, BP Amoco and Monsanto in UK, Cockerill Steel in Belgium, BankBoston's subsidiary in Brazil have promulgated their global codes of best practice with stakeholder interests in mind (World Bank Report, 1999 in P.K. Yip, 2000; Tricker, 2000). Books or articles on the SHT also have proliferated (CG, Vol.7, No.2, 1999:147; Cadbury, Vinten, Williams and Francis all in 2000; Tricker, 2000:294). This lends some support for the Kohlbergian model on a macro level, i.e. that societies are evolving towards the higher stage of moral development.

After A. Smith wrote his book 'the Wealth of Nations', he argued that 'humanity, justice, generosity and altruism' were the basis of social

progress and welfare in his subsequent book 'The Theory of Moral Sentiments' (Chan, 2001:59-61; Smith, 1986:7-16). Great governors like T. Jefferson, J. Madison and Frederick the Great believed in ethical principles and common good preached by great political philosophers like J. Rousseau and T. Pain (Rakove, 1990). Unfortunately, economics developed along only one dimension and ethics was generally ignored. Recently, many scholars have striven to bring our focus back to ethics. In particular, the Nobel Laureate, Sen believed in duality (i.e. economics must have ethics in its content) and emphasized that we should think more about values such as rights, freedom and choice (Chan, 2001:60). He argued that rights, freedom and the like were the basis of ethics, on account of their intrinsic value, not as means to ends (*ibid.*:61).

In the East, based on Confucianism, Cheng (1995:2-6) criticized target setting, and the exclusively rational and analytical approach of modern scientific management. He attacked modernism for overstressing economic and utilitarian aspects (profit maximization, efficiency) at the expense of social, cultural and ethical development for individuals and society. In Hong Kong, K.S. Li 李嘉誠, probably the richest businessman locally, has been equally disillusioned with modernism (HKEJD,

12.10.2001:6). He drew our attention to pluralism; our need to accept diverse traditions, cultures and religions; our respect for rights, duties and equality in order to improve the quality of life, and create a more humane, caring, efficient and productive society; and our effort to avoid oppressing people and controlling their life, livelihood and destiny (*ibid.*). He warned that globalization was threatening our world, and that we must face our serious problems through the 'harmonious resolution of conflicts, progress together, social stability and trust.' He argued that only when we thought about these issues would there be any changes for the better (*ibid.*). Also in China, the communist leader President Jiang has repeatedly urged his Party to embrace 'Three Representations' (Ref), echoing the common good and the principles in SHT.

In their different ways, they are advocating that directors should take all stakeholders' views and input into account, and base their decisions on a balance of stakeholder interests that together with generosity of spirit represents the best interests of the community. That in turn, implies that directors, not least those in NPOs, should be more tolerant of the lengthy deliberative process of representative democracy in reaching informed decisions (Pain, 1945).

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App. II

PERSONAL PROFILE 個人簡介

1. 年齡組別 Age group

3	二十九歲以下	29 years and below
83	三十至四十九	30 – 49 years
31	五十至五十九	50 - 59 years
11	六十及以上	60 and above

2. 性別 Sex	28	女 female	100	男 male
3. 原國籍 Ethnicity	121	亞洲 Asian	7	非亞洲 Non Asian

4. 理事類別 Membership

75	非執行理事	Non-executive 兼職
53	執行理事	Executive 全職

5. 任期 Tenure

75	五年或以下	5 years and below
24	六至九年	6 – 9 years
17	十至十九年	10 – 19 years
12	二十年以上	20 years and above

6. 機構類別 HSIC (Hong Kong Standard Industrial Classifications)

11	公營機構	public administration
19	教育機構	education
2	醫療機構	health
13	福利機構	welfare
8	宗教組織	religions
28	工商會	trade association
29	文化機構	culture
1	文康體育組織	sports/recreation
39	其他(請列出)	Others (please specify)

7. 機構僱用人數 Number of employees in Nonprofit Organization

51	十九或以下	19 and below
29	二十至九十九	20 - 99
13	一百至四百九十九	100 – 499
35	五百以上	500 and above

App. III

Cancorr

Canonical Analysis Program

```
options ls=80 ps=80 nodate nonumber;
data phd;
filename fileref 'c:\chris\miscellaneous\anthony_cheng\temp1.prn';
infile fileref;
input age1 age2 age3 age4 sex ethn ed year1 year2 year3 year4 public educa
health welfare
relig trade culture sports others person1 person2 perosn3 person4 norma normb
normc normd
norme normf normg rolesa rolesb rolesc rolesd rolese respa respb respc respd
respe respf
respg resph respi powera powerb powerc powerd powere powerf powerg powerh
poweri powerj powerk
powerl powerm performa performb performc performd performe performf
performg performh performi
informa informb informc informd informe informf informg valuea valueb valuec
valued valuee
valuef valueg valueh valuei valuej valuek incenta incentb incentc incentd incente
incentf
incentg;
run;
```

```
/* Remarks : the variables in the above input statement are of same order as that
in the
          original excel data file */
proc cancorr data=phd all
     vprefix=firstset   vname='norm, resp, power, etc.'
     wprefix=incent    wname='Incent';

  var  norma normb normc normd norme normf normg rolesa rolesb rolesc rolesd
rolese respa respb
      respc respd respe respf respg resph respi powera powerb powerc powerd
powere powerf powerg
      powerh poweri powerj powerk powerl powerm performa performb performc
performd performe
      performf performg performh performi informa informb informc informd
informe informf
      informg valuea valueb valuec valued valuee valuef valueg valueh valuei
valuej valuek;
  with incenta incentb incentc incentd incente incentf incentg;
  title ' Canonical correlation analysis of PhD pilot survey';
run;
```

Canonical correlation analysis
Means and Standard Deviations

61 norm, resp, power, etc. 7 Incent 128 Observations

Variable	Mean	Std Dev	Variable	Mean	Std Dev
			PERFORMA	3.601563	0.806859
NORMA	3.445313	1.070790	PERFORMB	3.710938	0.775129
NORMB	4.195313	0.774176	PERFORMC	3.882813	0.838269
NORMC	3.570313	1.154816	PERFORMD	3.671875	0.823946
NORMD	3.781250	0.913051	PERFORME	4.023438	0.620704
NORME	3.664063	0.933011	PERFORMF	3.765625	0.882769
NORMF	3.859375	0.945227	PERFORMG	3.945313	0.745681
NORMG	3.546875	0.937910	PERFORMH	3.968750	0.752293
ROLESA	4.273438	0.893677	PERFORMI	2.898438	0.954392
ROLESB	3.210938	0.084264	INFORMA	3.625000	0.851122
ROLESC	3.257813	0.898346	INFORMB	3.367188	0.821666
ROLESD	3.359375	0.911297	INFORMC	3.320313	0.831786
ROLESE	3.679688	0.772903	INFORMD	3.343750	0.864319
RESPA	3.960938	0.797657	INFORME	3.656250	0.725655
RESPB	3.992188	0.693003	INFORMF	3.382813	0.973031
RESPC	3.984375	0.709712	INFORMG	3.203125	0.899338
RESPD	3.718750	0.895637	VALUEA	3.609375	0.765747
RESPE	3.984375	0.947308	VALUEB	3.398438	0.787099
RESPF	3.812500	0.945357	VALUEC	3.703125	0.724807
RESPG	4.070313	0.700771	VALUED	3.718750	0.772943
RESPH	3.718750	0.979615	VALUEE	3.429688	0.902172
RESPI	3.960938	0.757143	VALUEF	3.679688	0.772903
POWERA	3.375000	1.049934	VALUEG	3.781250	0.675062
POWERB	3.843750	0.798004	VALUEH	3.992188	0.681546
POWERC	3.296875	0.983000	VALUEI	3.585938	0.918123
POWERD	3.742188	0.805943	VALUEJ	3.804688	0.823461
POWERE	3.390625	0.834628	VALUEK	3.593750	0.845903
POWERF	2.500000	0.963916	INCENTA	2.484375	0.963788
POWERG	3.101563	0.937746	INCENTB	3.109375	1.059151
POWERH	3.921875	0.799699	INCENTC	2.835938	1.002181
POWERI	2.367188	0.802271	INCENTD	3.867188	0.644432
POWERJ	3.625000	0.832414	INCENTE	2.609375	0.941053
POWERK	3.898438	0.811724	INCENTF	2.343750	0.917352
POWERL	2.101563	0.761679	INCENTG	3.687500	0.810852
POWERM	3.953125	0.772147			

Canonical correlation analysis

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	NORMA	NORMB	NORMC	NORMD	NORME
NORMA	1.0000	0.3692	0.0668	0.1246	0.1352
NORMB	0.3692	1.0000	0.0330	0.0943	0.2115
NORMC	0.0668	0.0330	1.0000	0.1715	0.1281
NORMD	0.1246	0.0943	0.1715	1.0000	0.4307
NORME	0.1352	0.2115	0.1281	0.4307	1.0000
NORMF	0.3580	0.2746	0.1173	0.3199	0.3121
NORMG	0.0065	0.1879	0.1532	0.1316	0.0946
ROLESA	0.1433	0.1840	0.1529	-0.0033	0.2149
ROLESB	-0.0137	-0.1527	-0.1471	-0.0087	0.0005
ROLESC	0.1416	0.1082	0.2215	0.1749	0.1229
ROLESD	-0.1169	0.0225	0.2452	0.0574	0.2265
ROLESE	0.0691	0.0396	0.0651	0.0673	0.0134
RESPA	0.2694	0.1400	0.0073	0.1287	0.2467
RESPB	0.2276	0.2377	0.0843	0.2462	0.2516
RESPC	0.2061	0.2349	0.0974	0.2742	0.1466
RESPD	0.2301	0.2843	0.0193	0.0686	0.1216
RESPE	0.1466	0.1975	0.0946	0.0597	0.0653
RESPF	0.1687	0.1365	0.1348	0.0981	0.1958
RESPG	0.0629	0.2648	0.1641	0.1104	0.2773
RESPH	0.1654	0.1872	0.0385	0.1243	0.2663
RESPI	0.1576	0.2415	0.0617	0.1812	0.2934
POWERA	0.0674	0.0061	0.0170	0.0780	0.1859
POWERB	0.0636	-0.0522	0.1829	0.0824	0.1510
POWERC	0.1652	0.1094	0.3283	0.0378	-0.0707
POWERD	0.1158	0.2580	0.0154	0.1368	0.2295
POWERE	0.1122	0.2831	0.0448	0.0613	0.0889
POWERF	0.0114	-0.0264	0.0248	-0.1610	-0.1445
POWERG	0.2134	0.1243	0.0915	0.2009	0.2283
POWERH	0.1329	0.1902	-0.0366	0.2029	0.2178
POWERI	0.0006	-0.0150	-0.0493	-0.1690	-0.0653
POWERJ	0.1977	0.1634	0.1587	0.2953	0.2927

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	NORMA	NORMB	NORMC	NORMD	NORME
POWERK	0.0434	0.1571	0.0119	0.2248	0.2769
POWERL	-0.3166	-0.2342	0.0679	-0.1263	-0.0735
POWERM	0.1969	0.1603	0.0567	0.0635	0.1856
PERFORMA	-0.0664	0.1130	0.1697	0.1587	0.3542
PERFORMB	-0.0619	0.1998	0.2824	0.1436	0.3111
PERFORMC	0.0411	0.1690	0.2567	0.1720	0.3520
PERFORMD	0.0777	0.0889	0.3472	0.1864	0.2242
PERFORME	0.1500	0.2853	0.1570	0.2453	0.3264
PERFORMF	0.2529	0.2749	0.1399	0.3169	0.3912
PERFORMG	-0.0383	0.2642	0.1188	0.1789	0.2903
PERFORMH	0.2325	0.3891	0.1566	0.0817	0.2990
PERFORMI	-0.1403	0.0910	-0.1685	0.0556	-0.1536
INFORMA	0.0378	0.1957	0.2193	0.2381	0.2367
INFORMB	0.0722	0.1339	0.2755	0.1604	0.2135
INFORMC	0.0950	0.1466	0.4477	0.1552	0.1499
INFORMD	0.0545	0.1460	0.3385	0.0661	0.1639
INFORME	0.1378	0.1765	0.1606	0.2897	0.3863
INFORMF	0.0089	0.1404	0.1826	0.0950	0.0040
INFORMG	0.1097	0.1688	0.1757	0.1408	0.2509
VALUEA	0.0410	0.1430	0.2272	0.1809	0.2227
VALUEB	0.0961	0.1685	0.2765	0.1770	0.1086
VALUEC	-0.0008	0.2585	0.2039	0.0796	0.1774
VALUED	-0.0378	0.1715	0.1370	0.1464	0.1846
VALUEE	0.0449	0.0705	0.3449	0.1437	0.2570
VALUEF	0.0881	0.2764	0.0387	0.0450	0.3628
VALUEG	-0.0494	0.2180	0.1815	0.1006	0.1324
VALUEH	-0.0384	0.1820	0.1458	0.1238	0.2559
VALUEI	0.0369	0.1701	0.1057	0.1447	0.2040
VALUEJ	0.0101	0.1468	-0.0641	0.0579	0.1701
VALUEK	-0.0160	0.1943	0.0617	0.1593	0.1849

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	NORMF	NORMG	ROLESA	ROLESB	ROLESC
NORMA	0.3580	0.0065	0.1433	-0.0137	0.1416
NORMB	0.2746	0.1879	0.1840	-0.1527	0.1082
NORMC	0.1173	0.1532	0.1529	-0.1471	0.2215
NORMD	0.3199	0.1316	-0.0033	-0.0087	0.1749
NORME	0.3121	0.0946	0.2149	0.0005	0.1229
NORMF	1.0000	0.0785	0.2043	-0.0553	0.2099
NORMG	0.0785	1.0000	0.1960	-0.1685	0.0837
ROLESA	0.2043	0.1960	1.0000	-0.1738	0.2450
ROLESB	-0.0553	-0.1685	-0.1738	1.0000	-0.4039
ROLESC	0.2099	0.0837	0.2450	-0.4039	1.0000
ROLESD	0.0043	-0.0567	0.0524	0.0502	0.1937
ROLESE	-0.0729	-0.2344	0.0822	0.1658	0.0178
RESPA	0.1806	-0.0449	0.2692	-0.0723	0.1021
RESPB	0.1426	0.0914	0.1688	-0.0607	0.2183
RESPC	0.2432	0.0839	0.1309	-0.0264	0.0681
RESPD	0.2226	0.0439	0.3231	-0.2141	0.2474
RESPE	0.0943	0.0895	0.3027	-0.2191	0.2731
RESPF	0.2963	0.0722	0.1544	-0.1532	0.1315
RESPG	0.1696	0.0728	0.2079	-0.0819	0.0585
RESPH	0.2206	-0.0112	0.2324	-0.1661	0.1278
RESPI	0.2013	0.1190	0.1439	0.0773	0.0381
POWERA	0.0694	0.1179	0.1416	0.0545	0.0052
POWERB	0.0646	0.1256	0.1929	-0.0708	0.0237
POWERC	0.1216	0.1556	0.2116	-0.1922	0.1891
POWERD	0.2518	-0.1245	0.0658	-0.0094	0.2013
POWERE	0.0602	0.1072	0.0985	-0.1005	0.1167
POWERF	-0.0691	-0.0697	-0.0320	-0.0490	-0.0045
POWERG	0.2472	0.0527	0.0981	0.0330	0.2678
POWERH	0.1520	0.0574	0.1183	0.0555	0.1598
POWERI	-0.1806	-0.1120	-0.0643	0.0189	-0.1652
POWERJ	0.2227	-0.1185	0.0860	0.1407	0.2567
POWERK	0.1660	-0.1850	0.1146	0.0961	0.1550
POWERL	-0.1222	0.0649	-0.1105	-0.0166	-0.0961
POWERM	0.1851	0.0139	0.1100	0.0683	0.1084
PERFORMA	0.1634	0.1445	0.2396	-0.0112	0.0777

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	NORMF	NORMG	ROLESA	ROLESB	ROLESC
PERFORMB	0.1375	0.1650	0.1832	-0.0955	0.2096
PERFORMC	0.1679	0.0621	0.2638	-0.1632	0.2286
PERFORMD	0.2537	0.1118	0.1656	-0.1599	0.2216
PERFORME	0.2472	-0.0087	0.0877	0.0862	0.0597
PERFORMF	0.3943	-0.1293	0.1218	0.0932	0.1662
PERFORMG	0.1454	0.0994	0.2353	-0.1804	0.1152
PERFORMH	0.2927	-0.0425	0.1651	-0.0594	0.1169
PERFORMI	-0.0858	-0.0078	-0.0226	-0.1313	-0.0243
INFORMA	0.0122	0.1899	0.0013	-0.1440	0.2819
INFORMB	-0.0344	0.1359	0.0874	-0.0876	0.3401
INFORMC	0.0477	0.1673	0.0931	-0.0057	0.1942
INFORMD	0.0789	0.1451	0.0914	-0.0444	0.2095
INFORME	0.2274	0.1743	0.0247	-0.0172	0.2095
INFORMF	0.1104	-0.1277	-0.0398	0.1468	-0.0417
INFORMG	0.1450	0.0726	0.0773	0.0849	-0.0458
VALUEA	0.0323	-0.0510	0.0422	0.0242	0.0560
VALUEB	0.0759	0.0012	0.1126	0.0207	0.1431
VALUEC	0.0190	0.1596	0.2722	0.0603	0.0217
VALUED	0.0532	0.0509	-0.0018	0.0244	0.0712
VALUEE	0.1822	-0.0007	0.1461	0.1561	0.0760
VALUEF	0.1534	0.0915	0.1848	0.0249	0.0518
VALUEG	-0.0116	0.1780	0.2957	0.0528	-0.0361
VALUEH	0.0838	-0.0425	0.1457	0.1301	0.0033
VALUEI	0.2227	-0.0184	0.0335	0.0647	-0.0223
VALUEJ	0.1465	-0.0543	0.1266	0.0906	0.0260
VALUEK	0.1348	-0.0651	0.1481	0.0942	0.1182

Correlations Among the norm, resp, power, etc.

	ROLESD	ROLESE	RESPA	RESPB	RESPC
NORMA	-0.1169	0.0691	0.2694	0.2276	0.2061
NORMB	0.0225	0.0396	0.1400	0.2377	0.2349
NORMC	0.2452	0.0651	0.0073	0.0843	0.0974
NORMD	0.0574	0.0673	0.1287	0.2462	0.2742
NORME	0.2265	0.0134	0.2467	0.2516	0.1466
NORMF	0.0043	-0.0729	0.1806	0.1426	0.2432
NORMG	-0.0567	-0.2344	-0.0449	0.0914	0.0839
ROLESA	0.0524	0.0822	0.2692	0.1688	0.1309
ROLESB	0.0502	0.1658	-0.0723	-0.0607	-0.0264
ROLESC	0.1937	0.0178	0.1021	0.2183	0.0681
ROLESD	1.0000	0.4218	0.0845	0.2289	0.1061
ROLESE	0.4218	1.0000	0.1839	0.1864	0.1487
RESPA	0.0845	0.1839	1.0000	0.5122	0.4301
RESPB	0.2289	0.1864	0.5122	1.0000	0.6401
RESPC	0.1061	0.1487	0.4301	0.6401	1.0000
RESPD	-0.1260	-0.0174	0.5356	0.3643	0.4142
RESPE	0.0157	0.0146	0.4889	0.3716	0.2807
RESPF	0.1337	-0.1044	0.3557	0.3102	0.4064
RESPG	-0.0029	0.0564	0.3430	0.3092	0.2872
RESPH	-0.0182	0.1193	0.3587	0.3215	0.3334
RESPI	0.0547	0.2206	0.3234	0.3596	0.4678
POWERA	0.0226	0.0036	0.0552	0.0149	0.0819
POWERB	0.0995	0.1097	0.0893	0.0120	0.0930
POWERC	-0.0761	-0.0397	0.0350	0.0728	0.1083
POWERD	0.1164	-0.0198	0.2659	0.1655	0.1306
POWERE	0.1867	0.1833	0.1887	0.2095	0.1699
POWERF	-0.0986	0.0159	-0.1792	-0.1120	-0.2187
POWERG	0.1504	0.1756	0.2790	0.1951	0.1917
POWERH	0.1793	0.3159	0.2667	0.1694	0.1366
POWERI	-0.1173	-0.0628	-0.0635	-0.0231	-0.1281
POWERJ	0.2206	0.2647	0.2149	0.2815	0.1899
POWERK	0.1030	0.2364	0.2492	0.1945	0.2569
POWERL	0.0378	-0.1316	-0.3563	-0.0880	-0.2592
POWERM	0.0689	0.1066	0.2527	0.0729	0.0849

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	ROLESD	ROLESE	RESPA	RESPB	RESPC
PERFORMA	0.2177	0.1978	0.0857	-0.0197	0.0990
PERFORMB	0.1928	0.1465	0.0580	0.0984	0.1778
PERFORMC	0.2720	0.1239	0.2168	0.2288	0.1954
PERFORMD	0.2422	0.0809	0.1361	0.2989	0.3278
PERFORME	0.1938	0.1142	0.1927	0.2201	0.0723
PERFORMF	0.2621	0.1892	0.2776	0.2673	0.2203
PERFORMG	0.0871	0.0377	0.1552	0.1515	0.2364
PERFORMH	0.1429	0.0774	0.2210	0.3318	0.1613
PERFORMI	-0.1116	0.1050	-0.1397	-0.0369	-0.0489
INFORMA	0.1853	0.0434	0.0130	0.1819	0.0684
INFORMB	0.1904	0.0875	0.0100	0.1295	0.0234
INFORMC	0.2936	0.1119	-0.0047	0.2093	0.1419
INFORMD	0.2618	0.1072	0.0196	0.2411	0.1885
INFORME	0.2002	0.0970	0.0991	0.0572	0.0812
INFORMF	0.1544	0.1957	-0.0617	-0.0656	-0.1053
INFORMG	0.2849	0.1623	0.0770	0.1415	0.1284
VALUEA	0.2592	0.2127	0.0006	0.0387	0.0032
VALUEB	0.2489	0.2891	-0.0001	0.0635	0.0394
VALUEC	0.0317	0.1381	-0.0747	-0.0047	0.0521
VALUED	0.1558	0.0457	0.0204	0.1870	0.1211
VALUEE	0.1651	0.1199	0.1001	0.1439	0.2196
VALUEF	0.1535	0.1696	0.2605	0.2158	0.3210
VALUEG	0.2568	0.2570	0.0717	0.2151	0.2886
VALUEH	0.2201	0.2344	0.0719	0.1332	0.1463
VALUEI	0.0569	0.0114	-0.0115	0.0691	0.1229
VALUEJ	-0.0211	0.1112	0.2280	0.2871	0.2373
VALUEK	0.2215	0.1487	0.1747	0.2363	0.2123

Correlations Among the norm, resp, power, etc.

	RESPD	RESPE	RESPF	RESPG	RESPH
NORMA	0.2301	0.1466	0.1687	0.0629	0.1654
NORMB	0.2843	0.1975	0.1365	0.2648	0.1872
NORMC	0.0193	0.0946	0.1348	0.1641	0.0385
NORMD	0.0686	0.0597	0.0981	0.1104	0.1243
NORME	0.1216	0.0653	0.1958	0.2773	0.2663
NORMF	0.2226	0.0943	0.2963	0.1696	0.2206
NORMG	0.0439	0.0895	0.0722	0.0728	-0.0112
ROLESA	0.3231	0.3027	0.1544	0.2079	0.2324
ROLESB	-0.2141	-0.2191	-0.1532	-0.0819	-0.1661
ROLESC	0.2474	0.2731	0.1315	0.0585	0.1278
ROLESD	-0.1260	0.0157	0.1337	-0.0029	-0.0182
ROLESE	-0.0174	0.0146	-0.1044	0.0564	0.1193
RESPA	0.5356	0.4889	0.3557	0.3430	0.3587
RESPB	0.3643	0.3716	0.3102	0.3092	0.3215
RESPC	0.4142	0.2807	0.4064	0.2872	0.3334
RESPD	1.0000	0.6537	0.3743	0.3328	0.5104
RESPE	0.6537	1.0000	0.3308	0.2745	0.3940
RESPF	0.3743	0.3308	1.0000	0.3410	0.3932
RESPG	0.3328	0.2745	0.3410	1.0000	0.2814
RESPH	0.5104	0.3940	0.3932	0.2814	1.0000
RESPI	0.4133	0.2626	0.3857	0.4949	0.4628
POWERA	0.0628	0.0693	0.0714	0.0281	0.0651
POWERB	0.1033	0.0592	0.0130	-0.0084	0.2254
POWERC	0.1045	0.1572	0.0858	0.0038	0.0874
POWERD	0.2369	0.1288	0.2771	0.2833	0.0670
POWERE	0.1376	0.1472	0.1534	0.2488	0.1836
POWERF	-0.1733	-0.2501	-0.2506	-0.1224	-0.2168
POWERG	0.1843	0.1259	0.0217	0.0250	0.0913
POWERH	0.2329	0.1647	0.0325	0.1785	0.1728
POWERI	-0.1510	-0.2410	-0.0954	-0.0603	-0.1982
POWERJ	0.2059	0.0824	0.1601	0.2615	0.1497
POWERK	0.2528	0.1310	0.1289	0.3587	0.3203
POWERL	-0.3041	-0.1615	-0.2577	-0.1905	-0.2358
POWERM	0.1743	0.0959	0.1497	0.3263	0.1178

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	RESPD	RESPE	RESPF	RESPG	RESPH
PERFORMA	0.1270	-0.0082	0.0458	0.2310	0.1659
PERFORMB	0.1769	0.1332	0.1296	0.3131	0.0269
PERFORMC	0.2075	0.2555	0.2105	0.2152	0.2760
PERFORMD	0.2367	0.2355	0.2944	0.2039	0.3140
PERFORME	0.1536	0.1345	0.2625	0.3401	0.1793
PERFORMF	0.2247	0.1086	0.3621	0.2814	0.2510
PERFORMG	0.2244	0.2329	0.2422	0.2033	0.2914
PERFORMH	0.1855	0.1429	0.1467	0.1536	0.1589
PERFORMI	-0.0153	-0.0192	-0.1696	0.0108	-0.0392
INFORMA	0.1188	0.0513	0.0391	0.0182	0.1653
INFORMB	0.1200	0.1389	0.0691	0.0916	0.1489
INFORMC	-0.0261	-0.0236	0.1571	0.0691	0.1114
INFORMD	0.0343	0.0451	0.2241	0.1808	0.1151
INFORME	0.0803	0.0265	0.0775	0.1098	0.1177
INFORMF	-0.0291	-0.0447	0.0701	0.0872	0.0891
INFORMG	-0.0947	-0.0979	0.1470	-0.0228	0.1547
VALUEA	-0.1500	-0.1170	0.0938	0.0663	-0.0321
VALUEB	0.0485	0.0190	0.0906	0.1487	-0.0373
VALUEC	0.1008	0.0391	-0.1049	0.0879	0.0367
VALUED	0.0668	0.1445	0.0781	0.1822	0.2483
VALUEE	0.1118	0.1461	0.2337	0.2134	0.1913
VALUEF	0.3238	0.3157	0.1758	0.2164	0.2753
VALUEG	0.0928	0.1301	0.1697	0.2824	0.1444
VALUEH	0.0867	0.1340	0.2788	0.2814	0.1972
VALUEI	0.0584	-0.0256	0.2909	0.1190	0.1672
VALUEJ	0.3413	0.1878	0.2864	0.2014	0.3609
VALUEK	0.1598	0.0903	0.3175	0.2080	0.2981

Correlations Among the norm, resp, power, etc.

	RESPI	POWERA	POWERB	POWERC	POWERD
NORMA	0.1576	0.0674	0.0636	0.1652	0.1158
NORMB	0.2415	0.0061	-0.0522	0.1094	0.2580
NORMC	0.0617	0.0170	0.1829	0.3283	0.0154
NORMD	0.1812	0.0780	0.0824	0.0378	0.1368
NORME	0.2934	0.1859	0.1510	-0.0707	0.2295
NORMF	0.2013	0.0694	0.0646	0.1216	0.2518
NORMG	0.1190	0.1179	0.1256	0.1556	-0.1245
ROLESA	0.1439	0.1416	0.1929	0.2116	0.0658
ROLESB	0.0773	0.0545	-0.0708	-0.1922	-0.0094
ROLESC	0.0381	0.0052	0.0237	0.1891	0.2013
ROLESD	0.0547	0.0226	0.0995	-0.0761	0.1164
ROLESE	0.2206	0.0036	0.1097	-0.0397	-0.0198
RESPA	0.3234	0.0552	0.0893	0.0350	0.2659
RESPB	0.3596	0.0149	0.0120	0.0728	0.1655
RESPC	0.4678	0.0819	0.0930	0.1083	0.1306
RESPD	0.4133	0.0628	0.1033	0.1045	0.2369
RESPE	0.2626	0.0693	0.0592	0.1572	0.1288
RESPF	0.3857	0.0714	0.0130	0.0858	0.2771
RESPG	0.4949	0.0281	-0.0084	0.0038	0.2833
RESPH	0.4628	0.0651	0.2254	0.0874	0.0670
RESPI	1.0000	0.2167	0.1332	0.0157	0.1898
POWERA	0.2167	1.0000	0.2960	0.1507	-0.0058
POWERB	0.1332	0.2960	1.0000	0.2604	-0.1733
POWERC	0.0157	0.1507	0.2604	1.0000	0.1570
POWERD	0.1898	-0.0058	-0.1733	0.1570	1.0000
POWERE	0.1988	0.0921	0.1869	0.2702	0.3148
POWERF	-0.3291	-0.2801	-0.2764	-0.1911	-0.0963
POWERG	0.2274	0.2329	0.1897	0.2489	0.2329
POWERH	0.3070	0.1383	0.0671	0.0197	0.3717
POWERI	-0.1447	-0.2676	-0.1557	-0.2292	-0.1082
POWERJ	0.3139	0.1351	0.0296	0.0794	0.4533
POWERK	0.3650	0.0358	0.1212	0.0282	0.4531
POWERL	-0.3344	-0.1662	-0.1291	-0.2194	-0.3033

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	RESPI	POWERA	POWERB	POWERC	POWERD
POWERM	0.3740	0.1287	0.0391	0.0807	0.4359
PERFORMA	0.2450	0.1034	0.1960	0.0510	0.0951
PERFORMB	0.2221	0.1149	0.1555	0.1032	0.1192
PERFORMC	0.2409	0.1845	0.1490	0.2432	0.1531
PERFORMD	0.2696	0.1343	0.1849	0.2184	0.2155
PERFORME	0.3706	0.0589	-0.0561	-0.0244	0.4057
PERFORMF	0.3161	0.0361	0.0482	0.0899	0.4346
PERFORMG	0.2891	0.0465	0.2105	0.2586	0.1991
PERFORMH	0.3020	-0.0050	-0.0344	-0.0299	0.3243
PERFORMI	-0.0600	-0.3153	-0.3105	-0.2278	-0.1469
INFORMA	0.0137	0.0000	0.0869	0.0776	0.1679
INFORMB	0.0359	-0.1061	0.1722	0.0005	0.0252
INFORMC	0.0700	-0.0665	0.1590	0.1043	0.0772
INFORMD	0.1290	0.0477	0.0328	0.1292	0.2526
INFORME	0.2047	-0.0155	-0.0255	-0.0103	0.1839
INFORMF	0.1060	-0.2264	-0.0745	-0.0704	0.1570
INFORMG	0.1389	-0.0396	0.1653	-0.0242	0.0620
VALUEA	0.0821	-0.0710	-0.0878	-0.0330	0.2821
VALUEB	0.1188	0.0655	-0.1007	0.1410	0.3122
VALUEC	0.1222	0.0233	0.0281	-0.0300	-0.0242
VALUED	0.2771	0.0437	0.0431	0.0589	0.1228
VALUEE	0.2207	-0.0218	-0.0373	0.0060	0.2294
VALUEF	0.2879	0.0619	0.0203	-0.1744	0.2203
VALUEG	0.2142	-0.0167	-0.0639	-0.0675	0.0837
VALUEH	0.3504	-0.0069	-0.0891	-0.0553	0.2687
VALUEI	0.2144	-0.0745	-0.0890	-0.0808	0.2590
VALUEJ	0.3918	-0.0512	0.0251	0.0527	0.2320
VALUEK	0.2455	-0.0133	0.0569	-0.0243	0.2841

Correlations Among the norm, resp, power, etc.

	POWERE	POWERF	POWERG	POWERH	POWERI
NORMA	0.1122	0.0114	0.2134	0.1329	0.0006
NORMB	0.2831	-0.0264	0.1243	0.1902	-0.0150
NORMC	0.0448	0.0248	0.0915	-0.0366	-0.0493
NORMD	0.0613	-0.1610	0.2009	0.2029	-0.1690
NORME	0.0889	-0.1445	0.2283	0.2178	-0.0653
NORMF	0.0602	-0.0691	0.2472	0.1520	-0.1806
NORMG	0.1072	-0.0697	0.0527	0.0574	-0.1120
ROLESA	0.0985	-0.0320	0.0981	0.1183	-0.0643
ROLESB	-0.1005	-0.0490	0.0330	0.0555	0.0189
ROLESC	0.1167	-0.0045	0.2678	0.1598	-0.1652
ROLESD	0.1867	-0.0986	0.1504	0.1793	-0.1173
ROLESE	0.1833	0.0159	0.1756	0.3159	-0.0628
RESPA	0.1887	-0.1792	0.2790	0.2667	-0.0635
RESPB	0.2095	-0.1120	0.1951	0.1694	-0.0231
RESPC	0.1699	-0.2187	0.1917	0.1366	-0.1281
RESPD	0.1376	-0.1733	0.1843	0.2329	-0.1510
RESPE	0.1472	-0.2501	0.1259	0.1647	-0.2410
RESPF	0.1534	-0.2506	0.0217	0.0325	-0.0954
RESPG	0.2488	-0.1224	0.0250	0.1785	-0.0603
RESPH	0.1836	-0.2168	0.0913	0.1728	-0.1982
RESPI	0.1988	-0.3291	0.2274	0.3070	-0.1447
POWERA	0.0921	-0.2801	0.2329	0.1383	-0.2676
POWERB	0.1869	-0.2764	0.1897	0.0671	-0.1557
POWERC	0.2702	-0.1911	0.2489	0.0197	-0.2292
POWERD	0.3148	-0.0963	0.2329	0.3717	-0.1082
POWERE	1.0000	-0.4209	0.3111	0.4000	-0.2277
POWERF	-0.4209	1.0000	-0.3180	-0.2962	0.4226
POWERG	0.3111	-0.3180	1.0000	0.5357	-0.4686
POWERH	0.4000	-0.2962	0.5357	1.0000	-0.4090
POWERI	-0.2277	0.4226	-0.4686	-0.4090	1.0000
POWERJ	0.3258	-0.1276	0.4224	0.5234	-0.3228
POWERK	0.2682	-0.1057	0.2723	0.4244	-0.2083
POWERL	-0.2239	0.3593	-0.3232	-0.2971	0.1962

Correlations Among the norm, resp, power, etc.

	POWERE	POWERF	POWERG	POWERH	POWERI
POWERM	0.2363	-0.1798	0.2350	0.4403	-0.0864
PERFORMA	0.1277	-0.1063	0.2412	0.3541	-0.1736
PERFORMB	0.2246	-0.0896	0.2357	0.3444	-0.2585
PERFORMC	0.2573	-0.1608	0.2557	0.2916	-0.2048
PERFORMD	0.2680	-0.1190	0.0333	0.1281	-0.1141
PERFORME	0.1494	-0.0724	0.1176	0.3051	-0.0965
PERFORMF	0.2000	0.0278	0.2002	0.2639	-0.0443
PERFORMG	0.2750	-0.1369	0.1544	0.1512	-0.0846
PERFORMH	0.1074	0.1737	0.0045	0.1268	0.1105
PERFORMI	-0.1870	0.2525	-0.3139	-0.0621	0.1108
INFORMA	0.1192	-0.0480	0.2059	0.1417	-0.0850
INFORMB	0.1911	0.0547	0.1147	0.0919	0.0328
INFORMC	0.1700	0.0638	0.1498	0.0616	-0.0006
INFORMD	0.2708	0.0756	0.1120	0.1189	-0.0131
INFORME	0.0414	0.0675	0.0749	0.2247	-0.0926
INFORMF	-0.0208	0.1469	-0.0688	0.0387	0.0203
INFORMG	0.0089	0.0636	0.0874	0.0660	0.1032
VALUEA	0.1544	0.0213	0.0995	0.2198	-0.0210
VALUEB	0.2407	0.0363	0.1154	0.1374	-0.1338
VALUEC	-0.0020	0.1240	0.0679	0.0819	-0.0683
VALUED	0.1594	-0.0423	0.0506	0.2062	-0.0099
VALUEE	0.1413	-0.0498	0.0690	0.1451	-0.0021
VALUEF	0.0734	-0.0898	0.1321	0.3032	-0.1644
VALUEG	0.1249	-0.0605	-0.0517	0.0994	-0.0395
VALUEH	0.1577	-0.0419	0.1245	0.2011	-0.0811
VALUEI	0.0792	0.0222	0.0035	0.0307	0.0370
VALUEJ	0.2035	-0.0744	0.0055	0.0603	0.0260
VALUEK	0.1262	-0.0869	0.0822	0.0575	-0.0685

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	POWERJ	POWERK	POWERL	POWERM	PERFORMA
NORMA	0.1977	0.0434	-0.3166	0.1969	-0.0664
NORMB	0.1634	0.1571	-0.2342	0.1603	0.1130
NORMC	0.1587	0.0119	0.0679	0.0567	0.1697
NORMD	0.2953	0.2248	-0.1263	0.0635	0.1587
NORME	0.2927	0.2769	-0.0735	0.1856	0.3542
NORMF	0.2227	0.1660	-0.1222	0.1851	0.1634
NORMG	-0.1185	-0.1850	0.0649	0.0139	0.1445
ROLESA	0.0860	0.1146	-0.1105	0.1100	0.2396
ROLESB	0.1407	0.0961	-0.0166	0.0683	-0.0112
ROLESC	0.2567	0.1550	-0.0961	0.1084	0.0777
ROLESD	0.2206	0.1030	0.0378	0.0689	0.2177
ROLESE	0.2647	0.2364	-0.1316	0.1066	0.1978
RESPA	0.2149	0.2492	-0.3563	0.2527	0.0857
RESPB	0.2815	0.1945	-0.0880	0.0729	-0.0197
RESPC	0.1899	0.2569	-0.2592	0.0849	0.0990
RESPD	0.2059	0.2528	-0.3041	0.1743	0.1270
RESPE	0.0824	0.1310	-0.1615	0.0959	-0.0082
RESPF	0.1601	0.1289	-0.2577	0.1497	0.0458
RESPG	0.2615	0.3587	-0.1905	0.3263	0.2310
RESPH	0.1497	0.3203	-0.2358	0.1178	0.1659
RESPI	0.3139	0.3650	-0.3344	0.3740	0.2450
POWERA	0.1351	0.0358	-0.1662	0.1287	0.1034
POWERB	0.0296	0.1212	-0.1291	0.0391	0.1960
POWERC	0.0794	0.0282	-0.2194	0.0807	0.0510
POWERD	0.4533	0.4531	-0.3033	0.4359	0.0951
POWERE	0.3258	0.2682	-0.2239	0.2363	0.1277
POWERF	-0.1276	-0.1057	0.3593	-0.1798	-0.1063
POWERG	0.4224	0.2723	-0.3232	0.2350	0.2412
POWERH	0.5234	0.4244	-0.2971	0.4403	0.3541
POWERI	-0.3228	-0.2083	0.1962	-0.0864	-0.1736
POWERJ	1.0000	0.5958	-0.2872	0.3767	0.2565

Correlations Among the Original Variables
Correlations Among the norm, resp, power, etc.

	POWERJ	POWERK	POWERL	POWERM	PERFORMA
POWERK	0.5958	1.0000	-0.4671	0.4572	0.3585
POWERL	-0.2872	-0.4671	1.0000	-0.5140	-0.1130
POWERM	0.3767	0.4572	-0.5140	1.0000	0.1846
PERFORMA	0.2565	0.3585	-0.1130	0.1846	1.0000
PERFORMB	0.3554	0.3785	-0.0966	0.1351	0.5446
PERFORMC	0.2863	0.2948	-0.1662	0.1618	0.2797
PERFORMD	0.2669	0.2677	-0.1347	0.1242	0.1690
PERFORME	0.5048	0.4111	-0.1716	0.2980	0.3175
PERFORMF	0.4795	0.5050	-0.2454	0.3534	0.1995
PERFORMG	0.2204	0.4591	-0.3090	0.1733	0.2122
PERFORMH	0.2452	0.2398	-0.0219	0.2279	0.1220
PERFORMI	-0.1177	0.0374	0.1226	-0.1134	-0.1552
INFORMA	0.1778	0.1952	-0.0380	-0.0030	0.1591
INFORMB	0.1453	0.2216	-0.0349	-0.0595	0.1987
INFORMC	0.2317	0.1302	-0.0145	-0.0132	0.2503
INFORMD	0.2681	0.1399	-0.0295	0.0597	0.1076
INFORME	0.2672	0.1809	-0.0076	0.0834	0.3156
INFORMF	0.2467	0.1992	-0.0316	-0.0178	0.0554
INFORMG	0.1762	0.0932	-0.0993	0.0705	0.2535
VALUEA	0.2872	0.1257	0.0416	0.0487	0.2304
VALUEB	0.2899	0.1501	-0.0418	0.1346	0.0908
VALUEC	0.1403	0.1223	0.0836	-0.0110	0.1731
VALUED	0.2998	0.2679	-0.0447	0.1361	0.1724
VALUEE	0.3316	0.2966	-0.0182	0.0857	0.2370
VALUEF	0.2769	0.2992	-0.0647	0.1594	0.2104
VALUEG	0.1611	0.1603	-0.0636	0.0255	0.2001
VALUEH	0.3140	0.2974	-0.0440	0.1639	0.2520
VALUEI	0.2176	0.2812	0.0381	0.1501	0.2220
VALUEJ	0.2484	0.3706	-0.1941	0.1217	0.1427
VALUEK	0.3746	0.3293	-0.1432	0.1032	0.1994

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	PERFORMB	PERFORMC	PERFORMD	PERFORME	PERFORMF
NORMA	-0.0619	0.0411	0.0777	0.1500	0.2529
NORMB	0.1998	0.1690	0.0889	0.2853	0.2749
NORMC	0.2824	0.2567	0.3472	0.1570	0.1399
NORMD	0.1436	0.1720	0.1864	0.2453	0.3169
NORME	0.3111	0.3520	0.2242	0.3264	0.3912
NORMF	0.1375	0.1679	0.2537	0.2472	0.3943
NORMG	0.1650	0.0621	0.1118	-0.0087	-0.1293
ROLESA	0.1832	0.2638	0.1656	0.0877	0.1218
ROLESB	-0.0955	-0.1632	-0.1599	0.0862	0.0932
ROLESC	0.2096	0.2286	0.2216	0.0597	0.1662
ROLESD	0.1928	0.2720	0.2422	0.1938	0.2621
ROLESE	0.1465	0.1239	0.0809	0.1142	0.1892
RESPA	0.0580	0.2168	0.1361	0.1927	0.2776
RESPB	0.0984	0.2288	0.2989	0.2201	0.2673
RESPC	0.1778	0.1954	0.3278	0.0723	0.2203
RESPD	0.1769	0.2075	0.2367	0.1536	0.2247
RESPE	0.1332	0.2555	0.2355	0.1345	0.1086
RESPF	0.1296	0.2105	0.2944	0.2625	0.3621
RESPG	0.3131	0.2152	0.2039	0.3401	0.2814
RESPH	0.0269	0.2760	0.3140	0.1793	0.2510
RESPI	0.2221	0.2409	0.2696	0.3706	0.3161
POWERA	0.1149	0.1845	0.1343	0.0589	0.0361
POWERB	0.1555	0.1490	0.1849	-0.0561	0.0482
POWERC	0.1032	0.2432	0.2184	-0.0244	0.0899
POWERD	0.1192	0.1531	0.2155	0.4057	0.4346
POWERE	0.2246	0.2573	0.2680	0.1494	0.2000
POWERF	-0.0896	-0.1608	-0.1190	-0.0724	0.0278
POWERG	0.2357	0.2557	0.0333	0.1176	0.2002
POWERH	0.3444	0.2916	0.1281	0.3051	0.2639
POWERI	-0.2585	-0.2048	-0.1141	-0.0965	-0.0443
POWERJ	0.3554	0.2863	0.2669	0.5048	0.4795

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	PERFORMB	PERFORMC	PERFORMD	PERFORME	PERFORMF
POWERK	0.3785	0.2948	0.2677	0.4111	0.5050
POWERL	-0.0966	-0.1662	-0.1347	-0.1716	-0.2454
POWERM	0.1351	0.1618	0.1242	0.2980	0.3534
PERFORMA	0.5446	0.2797	0.1690	0.3175	0.1995
PERFORMB	1.0000	0.5291	0.4051	0.3579	0.2569
PERFORMC	0.5291	1.0000	0.5937	0.3685	0.2818
PERFORMD	0.4051	0.5937	1.0000	0.3231	0.2399
PERFORME	0.3579	0.3685	0.3231	1.0000	0.5131
PERFORMF	0.2569	0.2818	0.2399	0.5131	1.0000
PERFORMG	0.4629	0.5565	0.4447	0.3260	0.3990
PERFORMH	0.1194	0.2189	0.3390	0.4063	0.3683
PERFORMI	-0.0400	-0.1331	-0.1028	-0.0890	-0.0659
INFORMA	0.2163	0.2249	0.1488	0.1658	0.1755
INFORMB	0.2669	0.2230	0.1561	0.1683	0.2933
INFORMC	0.2913	0.2124	0.2809	0.2446	0.2532
INFORMD	0.2200	0.2082	0.3255	0.1903	0.2819
INFORME	0.2839	0.2051	0.1259	0.2453	0.4018
INFORMF	0.1583	0.1327	0.0695	0.2718	0.2428
INFORMG	0.0962	0.0632	0.1013	0.1889	0.2390
VALUEA	0.2858	0.1244	0.1572	0.3010	0.2712
VALUEB	0.2548	0.1668	0.1303	0.2225	0.3281
VALUEC	0.3086	0.0848	0.0466	0.1381	0.1488
VALUED	0.2707	0.3255	0.2249	0.3093	0.3296
VALUEE	0.2128	0.1400	0.1700	0.2350	0.3647
VALUEF	0.3305	0.2333	0.1799	0.2291	0.3623
VALUEG	0.3447	0.1352	0.2097	0.1815	0.1379
VALUEH	0.2938	0.2051	0.2338	0.4471	0.3503
VALUEI	0.3063	0.1922	0.1729	0.3626	0.3845
VALUEJ	0.1699	0.1035	0.1601	0.3171	0.3590
VALUEK	0.1918	0.0878	0.1349	0.4082	0.4725

	PERFORMG	PERFORMH	PERFORMI	INFORMA	INFORMB
NORMA	-0.0383	0.2325	-0.1403	0.0378	0.0722
NORMB	0.2642	0.3891	0.0910	0.1957	0.1339
NORMC	0.1188	0.1566	-0.1685	0.2193	0.2755
NORMD	0.1789	0.0817	0.0556	0.2381	0.1604
NORME	0.2903	0.2990	-0.1536	0.2367	0.2135
NORMF	0.1454	0.2927	-0.0858	0.0122	-0.0344
NORMG	0.0994	-0.0425	-0.0078	0.1899	0.1359
ROLESA	0.2353	0.1651	-0.0226	0.0013	0.0874
ROLESB	-0.1804	-0.0594	-0.1313	-0.1440	-0.0876
ROLESC	0.1152	0.1169	-0.0243	0.2819	0.3401
ROLESD	0.0871	0.1429	-0.1116	0.1853	0.1904
ROLESE	0.0377	0.0774	0.1050	0.0434	0.0875
RESPA	0.1552	0.2210	-0.1397	0.0130	0.0100
RESPB	0.1515	0.3318	-0.0369	0.1819	0.1295
RESPC	0.2364	0.1613	-0.0489	0.0684	0.0234
RESPD	0.2244	0.1855	-0.0153	0.1188	0.1200
RESPE	0.2329	0.1429	-0.0192	0.0513	0.1389
RESPF	0.2422	0.1467	-0.1696	0.0391	0.0691
RESPG	0.2033	0.1536	0.0108	0.0182	0.0916
RESPH	0.2914	0.1589	-0.0392	0.1653	0.1489
RESPI	0.2891	0.3020	-0.0600	0.0137	0.0359
POWERA	0.0465	-0.0050	-0.3153	0.0000	-0.1061
POWERB	0.2105	-0.0344	-0.3105	0.0869	0.1722
POWERC	0.2586	-0.0299	-0.2278	0.0776	0.0005
POWERD	0.1991	0.3243	-0.1469	0.1679	0.0252
POWERE	0.2750	0.1074	-0.1870	0.1192	0.1911
POWERF	-0.1369	0.1737	0.2525	-0.0480	0.0547
POWERG	0.1544	0.0045	-0.3139	0.2059	0.1147
POWERH	0.1512	0.1268	-0.0621	0.1417	0.0919
POWERI	-0.0846	0.1105	0.1108	-0.0850	0.0328
POWERJ	0.2204	0.2452	-0.1177	0.1778	0.1453
POWERK	0.4591	0.2398	0.0374	0.1952	0.2216
POWERL	-0.3090	-0.0219	0.1226	-0.0380	-0.0349
POWERM	0.1733	0.2279	-0.1134	-0.0030	-0.0595
PERFORMA	0.2122	0.1220	-0.1552	0.1591	0.1987

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	PERFORMG	PERFORMH	PERFORMI	INFORMA	INFORMB
PERFORMB	0.4629	0.1194	-0.0400	0.2163	0.2669
PERFORMC	0.5565	0.2189	-0.1331	0.2249	0.2230
PERFORMD	0.4447	0.3390	-0.1028	0.1488	0.1561
PERFORME	0.3260	0.4063	-0.0890	0.1658	0.1683
PERFORMF	0.3990	0.3683	-0.0659	0.1755	0.2933
PERFORMG	1.0000	0.2636	0.0364	0.1287	0.2001
PERFORMH	0.2636	1.0000	-0.0154	0.1414	0.1716
PERFORMI	0.0364	-0.0154	1.0000	-0.0085	-0.0424
INFORMA	0.1287	0.1414	-0.0085	1.0000	0.5250
INFORMB	0.2001	0.1716	-0.0424	0.5250	1.0000
INFORMC	0.1427	0.1923	-0.1273	0.4491	0.6215
INFORMD	0.2004	0.2831	-0.0719	0.4014	0.5083
INFORME	0.1542	0.2398	-0.0622	0.3506	0.4643
INFORMF	0.1376	0.2101	0.0846	0.1557	0.2955
INFORMG	0.1576	0.2073	-0.0950	0.2443	0.3458
VALUEA	0.0312	0.2110	0.0099	0.1842	0.2172
VALUEB	0.1179	0.1010	0.0228	0.2013	0.1860
VALUEC	0.1445	0.1706	0.0813	0.1500	0.2770
VALUED	0.2737	0.3098	-0.1351	0.1616	0.2259
VALUEE	0.1640	0.2752	-0.0678	0.1602	0.3166
VALUEF	0.3382	0.2264	-0.0124	0.1751	0.2734
VALUEG	0.2420	0.0795	0.0997	0.1028	0.2311
VALUEH	0.2006	0.1377	-0.1102	0.0764	0.1598
VALUEI	0.2312	0.2433	-0.0214	0.1323	0.1301
VALUEJ	0.2389	0.3205	0.0146	0.0969	0.2465
VALUEK	0.1767	0.1902	-0.0125	0.1586	0.3409

Correlations Among the Original Variables
Correlations Among the norm, resp, power, etc.

	INFORMC	INFORMD	INFORME	INFORMF	INFORMG
NORMA	0.0950	0.0545	0.1378	0.0089	0.1097
NORMB	0.1466	0.1460	0.1765	0.1404	0.1688
NORMC	0.4477	0.3385	0.1606	0.1826	0.1757
NORMD	0.1552	0.0661	0.2897	0.0950	0.1408
NORME	0.1499	0.1639	0.3863	0.0040	0.2509
NORMF	0.0477	0.0789	0.2274	0.1104	0.1450
NORMG	0.1673	0.1451	0.1743	-0.1277	0.0726
ROLESA	0.0931	0.0914	0.0247	-0.0398	0.0773
ROLESB	-0.0057	-0.0444	-0.0172	0.1468	0.0849
ROLESC	0.1942	0.2095	0.2095	-0.0417	-0.0458
ROLESD	0.2936	0.2618	0.2002	0.1544	0.2849
ROLESE	0.1119	0.1072	0.0970	0.1957	0.1623
RESPA	-0.0047	0.0196	0.0991	-0.0617	0.0770
RESPB	0.2093	0.2411	0.0572	-0.0656	0.1415
RESPC	0.1419	0.1885	0.0812	-0.1053	0.1284
RESPD	-0.0261	0.0343	0.0803	-0.0291	-0.0947
RESPE	-0.0236	0.0451	0.0265	-0.0447	-0.0979
RESPF	0.1571	0.2241	0.0775	0.0701	0.1470
RESPG	0.0691	0.1808	0.1098	0.0872	-0.0228
RESPH	0.1114	0.1151	0.1177	0.0891	0.1547
RESPI	0.0700	0.1290	0.2047	0.1060	0.1389
POWERA	-0.0665	0.0477	-0.0155	-0.2264	-0.0396
POWERB	0.1590	0.0328	-0.0255	-0.0745	0.1653
POWERC	0.1043	0.1292	-0.0103	-0.0704	-0.0242
POWERD	0.0772	0.2526	0.1839	0.1570	0.0620
POWERE	0.1700	0.2708	0.0414	-0.0208	0.0089
POWERF	0.0638	0.0756	0.0675	0.1469	0.0636
POWERG	0.1498	0.1120	0.0749	-0.0688	0.0874
POWERH	0.0616	0.1189	0.2247	0.0387	0.0660
POWERI	-0.0006	-0.0131	-0.0926	0.0203	0.1032

Correlations Among the norm, resp, power, etc.

	INFORMC	INFORMD	INFORME	INFORMF	INFORMG
POWERJ	0.2317	0.2681	0.2672	0.2467	0.1762
POWERK	0.1302	0.1399	0.1809	0.1992	0.0932
POWERL	-0.0145	-0.0295	-0.0076	-0.0316	-0.0993
POWERM	-0.0132	0.0597	0.0834	-0.0178	0.0705
PERFORMA	0.2503	0.1076	0.3156	0.0554	0.2535
PERFORMB	0.2913	0.2200	0.2839	0.1583	0.0962
PERFORMC	0.2124	0.2082	0.2051	0.1327	0.0632
PERFORMD	0.2809	0.3255	0.1259	0.0695	0.1013
PERFORME	0.2446	0.1903	0.2453	0.2718	0.1889
PERFORMF	0.2532	0.2819	0.4018	0.2428	0.2390
PERFORMG	0.1427	0.2004	0.1542	0.1376	0.1576
PERFORMH	0.1923	0.2831	0.2398	0.2101	0.2073
PERFORMI	-0.1273	-0.0719	-0.0622	0.0846	-0.0950
INFORMA	0.4491	0.4014	0.3506	0.1557	0.2443
INFORMB	0.6215	0.5083	0.4643	0.2955	0.3458
INFORMC	1.0000	0.7109	0.4056	0.2948	0.5334
INFORMD	0.7109	1.0000	0.4410	0.2355	0.4160
INFORME	0.4056	0.4410	1.0000	0.2659	0.3733
INFORMF	0.2948	0.2355	0.2659	1.0000	0.2704
INFORMG	0.5334	0.4160	0.3733	0.2704	1.0000
VALUEA	0.3834	0.3353	0.3233	0.2657	0.2876
VALUEB	0.2726	0.3874	0.2830	0.2825	0.1184
VALUEC	0.2635	0.1642	0.2386	0.2071	0.2140
VALUED	0.2882	0.2284	0.2755	0.1443	0.2867
VALUEE	0.3608	0.3645	0.2996	0.2148	0.2507
VALUEF	0.1731	0.2958	0.4620	0.1329	0.2869
VALUEG	0.2660	0.3053	0.2150	0.2364	0.2942
VALUEH	0.2128	0.2586	0.1856	0.2895	0.1953
VALUEI	0.2163	0.2205	0.2338	0.3287	0.2552
VALUEJ	0.1036	0.2168	0.1239	0.1432	0.0540
VALUEK	0.3319	0.3325	0.2197	0.3052	0.3577

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	VALUEA	VALUEB	VALUEC	VALUED	VALUEE
NORMA	0.0410	0.0961	-0.0008	-0.0378	0.0449
NORMB	0.1430	0.1685	0.2585	0.1715	0.0705
NORMC	0.2272	0.2765	0.2039	0.1370	0.3449
NORMD	0.1809	0.1770	0.0796	0.1464	0.1437
NORME	0.2227	0.1086	0.1774	0.1846	0.2570
NORMF	0.0323	0.0759	0.0190	0.0532	0.1822
NORMG	-0.0510	0.0012	0.1596	0.0509	-0.0007
ROLESA	0.0422	0.1126	0.2722	-0.0018	0.1461
ROLESB	0.0242	0.0207	0.0603	0.0244	0.1561
ROLESC	0.0560	0.1431	0.0217	0.0712	0.0760
ROLESD	0.2592	0.2489	0.0317	0.1558	0.1651
ROLESE	0.2127	0.2891	0.1381	0.0457	0.1199
RESPA	0.0006	-0.0001	-0.0747	0.0204	0.1001
RESPB	0.0387	0.0635	-0.0047	0.1870	0.1439
RESPC	0.0032	0.0394	0.0521	0.1211	0.2196
RESPD	-0.1500	0.0485	0.1008	0.0668	0.1118
RESPE	-0.1130	0.0190	0.0391	0.1445	0.1461
RESPF	0.0938	0.0906	-0.1049	0.0781	0.2337
RESPG	0.0663	0.1487	0.0879	0.1822	0.2134
RESPH	-0.0321	-0.0373	0.0367	0.2483	0.1913
RESPI	0.0821	0.1188	0.1222	0.2771	0.2207
POWERA	-0.0710	0.0655	0.0233	0.0437	-0.0218
POWERB	-0.0878	-0.1007	0.0281	0.0431	-0.0373
POWERC	-0.0330	0.1410	-0.0300	0.0589	0.0060
POWERD	0.2821	0.3122	-0.0242	0.1228	0.2294
POWERE	0.1544	0.2407	-0.0020	0.1594	0.1413
POWERF	0.0213	0.0363	0.1240	-0.0423	-0.0498
POWERG	0.0995	0.1154	0.0679	0.0506	0.0690

Correlations Among the norm, resp, power, etc.

	VALUEA	VALUEB	VALUEC	VALUED	VALUEE
POWERH	0.2198	0.1374	0.0819	0.2062	0.1451
POWERI	-0.0210	-0.1338	-0.0683	-0.0099	-0.0021
POWERJ	0.2872	0.2899	0.1403	0.2998	0.3316
POWERK	0.1257	0.1501	0.1223	0.2679	0.2966
POWERL	0.0416	-0.0418	0.0836	-0.0447	-0.0182
POWERM	0.0487	0.1346	-0.0110	0.1361	0.0857
PERFORMA	0.2304	0.0908	0.1731	0.1724	0.2370
PERFORMB	0.2858	0.2548	0.3086	0.2707	0.2128
PERFORMC	0.1244	0.1668	0.0848	0.3255	0.1400
PERFORMD	0.1572	0.1303	0.0466	0.2249	0.1700
PERFORME	0.3010	0.2225	0.1381	0.3093	0.2350
PERFORMF	0.2712	0.3281	0.1488	0.3296	0.3647
PERFORMG	0.0312	0.1179	0.1445	0.2737	0.1640
PERFORMH	0.2110	0.1010	0.1706	0.3098	0.2752
PERFORMI	0.0099	0.0228	0.0813	-0.1351	-0.0678
INFORMA	0.1842	0.2013	0.1500	0.1616	0.1602
INFORMB	0.2172	0.1860	0.2770	0.2259	0.3166
INFORMC	0.3834	0.2726	0.2635	0.2882	0.3608
INFORMD	0.3353	0.3874	0.1642	0.2284	0.3645
INFORME	0.3233	0.2830	0.2386	0.2755	0.2996
INFORMF	0.2657	0.2825	0.2071	0.1443	0.2148
INFORMG	0.2876	0.1184	0.2140	0.2867	0.2507
VALUEA	1.0000	0.5346	0.3143	0.1987	0.4386
VALUEB	0.5346	1.0000	0.4436	0.2115	0.3225
VALUEC	0.3143	0.4436	1.0000	0.2714	0.3532
VALUED	0.1987	0.2115	0.2714	1.0000	0.4570
VALUEE	0.4386	0.3225	0.3532	0.4570	1.0000
VALUEF	0.1994	0.2244	0.3630	0.2434	0.4248
VALUEG	0.2447	0.3135	0.4295	0.2132	0.3624
VALUEH	0.3411	0.3728	0.3300	0.2798	0.4025
VALUEI	0.3505	0.3717	0.2043	0.3339	0.3496
VALUEJ	0.1403	0.1939	0.1659	0.2470	0.3364
VALUEK	0.3244	0.2687	0.3026	0.3658	0.4782

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	VALUEF	VALUEG	VALUEH	VALUEI	VALUEJ
NORMA	0.0881	-0.0494	-0.0384	0.0369	0.0101
NORMB	0.2764	0.2180	0.1820	0.1701	0.1468
NORMC	0.0387	0.1815	0.1458	0.1057	-0.0641
NORMD	0.0450	0.1006	0.1238	0.1447	0.0579
NORME	0.3628	0.1324	0.2559	0.2040	0.1701
NORMF	0.1534	-0.0116	0.0838	0.2227	0.1465
NORMG	0.0915	0.1780	-0.0425	-0.0184	-0.0543
ROLESA	0.1848	0.2957	0.1457	0.0335	0.1266
ROLESB	0.0249	0.0528	0.1301	0.0647	0.0906
ROLESC	0.0518	-0.0361	0.0033	-0.0223	0.0260
ROLESD	0.1535	0.2568	0.2201	0.0569	-0.0211
ROLESE	0.1696	0.2570	0.2344	0.0114	0.1112
RESPA	0.2605	0.0717	0.0719	-0.0115	0.2280
RESPB	0.2158	0.2151	0.1332	0.0691	0.2871
RESPC	0.3210	0.2886	0.1463	0.1229	0.2373
RESPD	0.3238	0.0928	0.0867	0.0584	0.3413
RESPE	0.3157	0.1301	0.1340	-0.0256	0.1878
RESPF	0.1758	0.1697	0.2788	0.2909	0.2864
RESPG	0.2164	0.2824	0.2814	0.1190	0.2014
RESPH	0.2753	0.1444	0.1972	0.1672	0.3609
RESPI	0.2879	0.2142	0.3504	0.2144	0.3918
POWERA	0.0619	-0.0167	-0.0069	-0.0745	-0.0512
POWERB	0.0203	-0.0639	-0.0891	-0.0890	0.0251
POWERC	-0.1744	-0.0675	-0.0553	-0.0808	0.0527
POWERD	0.2203	0.0837	0.2687	0.2590	0.2320
POWERE	0.0734	0.1249	0.1577	0.0792	0.2035
POWERF	-0.0898	-0.0605	-0.0419	0.0222	-0.0744
POWERG	0.1321	-0.0517	0.1245	0.0035	0.0055
POWERH	0.3032	0.0994	0.2011	0.0307	0.0603
POWERI	-0.1644	-0.0395	-0.0811	0.0370	0.0260
POWERJ	0.2769	0.1611	0.3140	0.2176	0.2484

Correlations Among the norm, resp, power, etc.

	VALUEF	VALUEG	VALUEH	VALUEI	VALUEJ
POWERK	0.2992	0.1603	0.2974	0.2812	0.3706
POWERL	- 0.0647	-0.0636	-0.0440	0.0381	-0.1941
POWERM	0.1594	0.0255	0.1639	0.1501	0.1217
PERFORMA	0.2104	0.2001	0.2520	0.2220	0.1427
PERFORMB	0.3305	0.3447	0.2938	0.3063	0.1699
PERFORMC	0.2333	0.1352	0.2051	0.1922	0.1035
PERFORMD	0.1799	0.2097	0.2338	0.1729	0.1601
PERFORME	0.2291	0.1815	0.4471	0.3626	0.3171
PERFORMF	0.3623	0.1379	0.3503	0.3845	0.3590
PERFORMG	0.3382	0.2420	0.2006	0.2312	0.2389
PERFORMH	0.2264	0.0795	0.1377	0.2433	0.3205
PERFORMI	-0.0124	0.0997	-0.1102	-0.0214	0.0146
INFORMA	0.1751	0.1028	0.0764	0.1323	0.0969
INFORMB	0.2734	0.2311	0.1598	0.1301	0.2465
INFORMC	0.1731	0.2660	0.2128	0.2163	0.1036
INFORMD	0.2958	0.3053	0.2586	0.2205	0.2168
INFORME	0.1620	0.2150	0.1856	0.2338	0.1239
INFORMF	0.1329	0.2364	0.2895	0.3287	0.1432
INFORMG	0.2869	0.2942	0.1953	0.2552	0.0540
VALUEA	0.1994	0.2447	0.3411	0.3505	0.1403
VALUEB	0.2244	0.3135	0.3728	0.3717	0.1939
VALUEC	0.3630	0.4295	0.3300	0.2043	0.1659
VALUED	0.2434	0.2132	0.2798	0.3339	0.2470
VALUEE	0.4248	0.3624	0.4025	0.3496	0.3364
VALUEF	1.0000	0.5287	0.4287	0.3664	0.2968
VALUEG	0.5287	1.0000	0.5439	0.3863	0.2767
VALUEH	0.4287	0.5439	1.0000	0.5988	0.4322
VALUEI	0.3664	0.3863	0.5988	1.0000	0.5067
VALUEJ	0.2968	0.2767	0.4322	0.5067	1.0000
VALUEK	0.3414	0.3947	0.4861	0.5015	0.5747

Correlations Among the Original Variables

Correlations Among the norm, resp, power, etc.

	VALUEK		VALUEK
NORMA	-0.0160	POWERM	0.1032
NORMB	0.1943	PERFORMA	0.1994
NORMC	0.0617	PERFORMB	0.1918
NORMD	0.1593	PERFORMC	0.0878
NORME	0.1849	PERFORMD	0.1349
NORMF	0.1348	PERFORME	0.4082
NORMG	-0.0651	PERFORMF	0.4725
ROLESA	0.1481	PERFORMG	0.1767
ROLESB	0.0942	PERFORMH	0.1902
ROLESC	0.1182	PERFORMI	-0.0125
ROLESD	0.2215	INFORMA	0.1586
ROLESE	0.1487	INFORMB	0.3409
RESPA	0.1747	INFORMC	0.3319
RESPB	0.2363	INFORMD	0.3325
RESPC	0.2123	INFORME	0.2197
RESPD	0.1598	INFORMF	0.3052
RESPE	0.0903	INFORMG	0.3577
RESPF	0.3175	VALUEA	0.3244
RESPG	0.2080	VALUEB	0.2687
RESPH	0.2981	VALUEC	0.3026
RESPI	0.2455	VALUED	0.3658
POWERA	-0.0133	VALUEE	0.4782
POWERB	0.0569	VALUEF	0.3414
POWERC	-0.0243	VALUEG	0.3947
POWERD	0.2841	VALUEH	0.4861
POWERE	0.1262	VALUEI	0.5015
POWERF	-0.0869	VALUEJ	0.5747
POWERG	0.0822	VALUEK	1.0000
POWERH	0.0575		
POWERI	-0.0685		
POWERJ	0.3746		
POWERK	0.3293		
POWERL	-0.1432		

Correlations Among the Original Variables

Correlations Among the Incent

	INCENTA	INCENTB	INCENTC	INCENTD	INCENTE	INCENTF	INCENTG
INCENTA	1.0000	0.3179	0.1971	-0.1872	0.1755	0.1931	-0.2179
INCENTB	0.3179	1.0000	0.2173	0.0099	0.0037	-0.1200	-0.2533
INCENTC	0.1971	0.2173	1.0000	0.0148	-0.0992	-0.1886	0.0706
INCENTD	-0.1872	0.0099	0.0148	1.0000	1.0000	0.4942	-0.2851
INCENTE	0.1755	0.0037	0.2989	-0.0992	0.4942	1.0000	-0.2461
INCENTF	0.1931	-0.1200	0.4644	-0.1886	0.2851	-0.2461	1.0000
INCENTG	-0.2179	-0.2533	-0.1023	0.0706			

Correlations Among the Original Variables

Correlations Between the norm, resp, power, etc. and the Incent

	INCENTA	INCENTB	INCENTC	INCENTD
NORMA	0.0106	0.0539	-0.1222	0.2347
NORMB	-0.1806	0.0410	0.0315	0.2891
NORMC	-0.0521	-0.1029	-0.1022	-0.0350
NORMD	-0.1560	-0.0402	-0.0051	-0.0498
NORME	-0.1241	0.0375	-0.1268	0.2395
NORMF	0.0062	-0.0238	0.0669	0.0467
NORMG	-0.0602	-0.0448	0.0795	0.1732
ROLESA	-0.0087	0.0597	-0.0111	0.2960
ROLESB	0.1350	0.0689	0.0249	0.0404
ROLESC	-0.0726	-0.0464	-0.1538	0.0460
ROLESD	-0.1280	-0.1308	0.0823	0.2026
ROLESE	-0.0860	-0.0819	0.1044	0.2933
RESPA	-0.1083	0.0517	0.0116	0.1736
RESPB	-0.1240	0.0119	-0.0359	0.1387
RESPC	-0.1961	0.0128	-0.0701	0.1504
RESPD	0.0952	0.1323	-0.1308	0.1121
RESPE	0.0256	0.1508	0.0470	0.0998
RESPF	-0.2107	0.0836	-0.1657	0.0881
RESPG	-0.0625	0.1487	0.0166	0.0906
RESPH	0.0704	-0.0005	-0.0634	0.1524
RESPI	-0.1357	0.0348	-0.1330	0.2313
POWERA	-0.0253	-0.0301	-0.1730	0.0742
POWERB	-0.1158	-0.1659	-0.1603	0.0206
POWERC	-0.1945	-0.0314	-0.2939	-0.0243

POWERD	-0.1421	0.0056	-0.0528	0.0397
POWERE	-0.2077	0.0136	0.0207	0.1997
POWERF	0.1441	0.0309	-0.0041	0.0570
POWERG	-0.1420	-0.1619	-0.1329	0.1528
POWERH	-0.0629	0.0009	0.1214	0.1936
POWERI	0.1042	0.2489	-0.0126	-0.0725
POWERJ	-0.2331	-0.0424	-0.1404	0.1413
POWERK	-0.0876	0.0130	-0.0497	0.0192
POWERL	0.1899	-0.0041	0.0942	-0.0846
POWERM	-0.0751	0.0737	-0.0202	0.1456
PERFORMA	-0.1245	-0.0592	0.0549	0.2760
PERFORMB	-0.1695	0.0004	-0.0007	0.3324
PERFORMC	-0.0169	0.0323	-0.1168	0.2188
PERFORMD	-0.0759	-0.0037	-0.0848	0.0359
PERFORME	-0.0060	0.0440	0.0442	0.1653
PERFORMF	-0.1247	-0.0061	-0.1239	0.1386
PERFORMG	-0.1601	0.0475	-0.0648	0.1650
PERFORMH	-0.1636	-0.0649	-0.0173	0.1375
PERFORMI	0.1395	0.1591	0.2294	-0.1117
INFORMA	0.0360	-0.0240	-0.1650	0.0951
INFORMB	-0.1070	-0.0827	-0.1271	0.1820
INFORMC	-0.2245	-0.2099	-0.0970	0.1387
INFORMD	-0.1825	-0.1016	-0.0435	0.1392
INFORME	-0.1654	-0.0736	-0.0782	0.2889
INFORMF	-0.0985	-0.0257	0.0326	0.0943
INFORMG	-0.2507	-0.2136	-0.0676	0.2779
VALUEA	-0.2324	-0.1217	-0.0021	0.1334
VALUEB	-0.0800	0.0512	-0.0263	0.2138
VALUEC	-0.0631	-0.1215	0.0191	0.1678
VALUED	-0.0694	-0.1160	-0.0092	0.0983
VALUEE	-0.1507	-0.0990	-0.0869	0.0718
VALUEF	-0.1178	-0.1396	0.0028	0.4356
VALUEG	-0.1626	-0.0874	0.1444	0.3671
VALUEH	-0.1740	-0.1079	0.1249	0.3382
VALUEI	-0.2076	-0.1474	0.0368	0.2656
VALUEJ	-0.0981	0.0157	0.0181	0.2030
VALUEK	-0.1914	-0.1873	0.0044	0.2614

Canonical correlation analysis

Correlations Among the Original Variables
Correlations Between the norm, resp, power, etc. and the Incent

	INCENTE	INCENTF	INCENTG
NORMA	0.0255	-0.1410	0.0255
NORMB	0.1164	-0.0066	0.0353
NORMC	-0.1557	-0.1048	0.2675
NORMD	-0.0178	-0.1069	-0.0505
NORME	-0.0879	-0.2136	-0.0566
NORMF	0.1325	0.0289	-0.0783
NORMG	-0.0772	0.0726	0.1540
ROLESA	-0.0499	-0.0963	0.0971
ROLESB	0.0274	0.0294	-0.1036
ROLESC	-0.1314	-0.2613	0.0682
ROLESD	-0.0921	-0.0830	-0.1026
ROLESE	0.0864	-0.0323	-0.0353
RESPA	0.0529	-0.0999	-0.1286
RESPB	0.0436	-0.1444	-0.0044
RESPC	0.0497	-0.1126	-0.0359
RESPD	-0.0940	-0.2360	0.0081
RESPE	-0.1659	-0.1116	-0.0474
RESPF	-0.1184	-0.2792	-0.0154
RESPG	0.0062	-0.1236	0.0805
RESPH	-0.0945	-0.1194	0.0669
RESPI	-0.0216	-0.0939	0.0056
POWERA	-0.0657	-0.0613	0.0925
POWERB	-0.2916	-0.2165	0.1917
POWERC	-0.2652	-0.2363	0.2457
POWERD	-0.0612	-0.2093	0.0444
POWERE	-0.1451	-0.1048	0.1585
POWERF	0.2604	0.0356	0.0907
POWERG	-0.0796	-0.1690	0.0835
POWERH	0.0010	-0.0382	0.0349
POWERI	0.1602	0.0411	-0.1611
POWERJ	-0.0880	-0.2733	0.1867

POWERK	-0.0420	-0.2383	0.1428
POWERL	0.0997	0.2088	-0.0502
POWERM	-0.1554	-0.1216	0.0770
PERFORMA	-0.0407	-0.1220	0.2776
PERFORMB	-0.1236	-0.1360	0.2310
PERFORMC	-0.2382	-0.1929	0.2469
PERFORMD	-0.2072	-0.0788	0.1871
PERFORME	-0.0246	-0.0834	0.1085
PERFORMF	-0.0732	-0.2887	0.0619
PERFORMG	-0.0980	-0.1104	0.1538
PERFORMH	0.1050	0.0043	0.0097
PERFORMI	0.2886	0.1391	-0.2143
INFORMA	-0.2531	-0.2370	0.2054
INFORMB	-0.1898	-0.2001	0.1618
INFORMC	-0.2211	-0.1764	0.2897
INFORMD	-0.1240	-0.1403	0.2107
INFORME	-0.0368	-0.0931	0.0970
INFORMF	0.0528	-0.0868	0.0830
INFORMG	0.0294	-0.0567	0.1093
VALUEA	-0.0604	0.0021	0.1062
VALUEB	-0.1497	-0.2348	0.1103
VALUEC	-0.0213	0.0007	0.1491
VALUED	-0.0548	-0.0180	0.1476
VALUEE	-0.0790	-0.1038	0.1419
VALUEF	-0.0002	-0.0878	0.1029
VALUEG	0.0875	0.0207	0.1043
VALUEH	0.0320	-0.1216	0.1523
VALUEI	0.0118	-0.2036	0.2267
VALUEJ	-0.0078	-0.2336	0.0376
VALUEK	-0.0031	-0.2347	0.1464

Regression Analysis on Behavioural Norms

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation
1	0.481483	0.375758	0.068164	0.231826
2	0.385385	0.264338	0.075556	0.148522
3	0.330938	.	0.079017	0.109520
4	0.261170	0.222188	0.082683	0.068210
5	0.175424	0.130695	0.086005	0.030773
6	0.101691	.	0.087818	0.010341
7	0.014906	.	0.088716	0.000222

Eigenvalues of Inv(E)*H
= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.3018	0.1274	0.4222	0.4222
2	0.1744	0.0514	0.2440	0.6662
3	0.1230	0.0498	0.1721	0.8382
4	0.0732	0.0415	0.1024	0.9407
5	0.0318	0.0213	0.0444	0.9851
6	0.0104	0.0102	0.0146	0.9997
7	0.0002		0.0003	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.52046254	1.63	49	583.18	0.0053
2	0.67753221	1.31	36	507.76	0.1129
3	0.79571293	1.10	25	432.42	0.3410

4	0.89357781	0.84	16	358.08	0.6400
5	0.95899053	0.55	9	287.33	0.8340
6	0.98943902	0.32	4	238	0.8667
7	0.99977780	0.03	1	120	0.8705

Multivariate Statistics and F Approximations

S=7 M=-0.5 N=56

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.52046254	1.63	49	583.18	0.0053
Pillai's Trace	0.59941494	1.61	49	840	0.0061
Hotelling-Lawley Trace	0.71483210	1.64	49	370.22	0.0061
Roy's Greatest Root	0.30178860	5.17	7	120	<.0001

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Raw Canonical Coefficients for the norm

	norm1	norm2	norm3	norm4
Norm a	0.503942715	0.180640626	-0.451051485	0.2815191979
Norm b	0.4648750213	-0.377874691	0.8927211496	-0.630383191
Norm c	-0.086104166	0.5875919857	-0.168824068	-0.403553543
Norm d	-0.459899491	-0.486110743	-0.071140152	-0.773880598
Norm e	0.7233585619	-0.133170307	-0.55077727	-0.063057696
Norm f	-0.34718038	-0.264993242	0.3234262003	0.5162197583
Norm g	0.2249444592	0.5063222648	0.4918050214	0.098893107

Raw Canonical Coefficients for the norm

	norm5	norm6	norm7
Norm a	0.3216469448	0.0891322779	0.6554206031
Norm b	0.531811806	-0.424090994	-0.298218412
Norm c	0.3648087901	0.1678012235	-0.296547705
Norm d	-0.009477856	0.1417380062	0.7139501968
Norm e	-0.583864012	0.101892339	-0.554950205
Norm f	0.212973047	0.8445113407	-0.406407765
Norm g	-0.626255702	0.3407344009	0.398322565

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4
Incent a *	-0.040280979	0.4385649741	-0.395725147	0.8911816665
Incent b*	0.2928041768	-0.000765812	0.1211026516	-0.039545809
Incent c*	-0.389692228	-0.252010291	0.3785387897	-0.184076743
Incent d	1.4207245413	0.1111598796	0.3888466927	0.4207001904
Incent e*	0.1597922329	-0.520453052	0.1929847811	0.0942631074
Incent f*	0.0139678978	0.5509344784	0.7421771575	0.3525637264
Incent g	0.1193603565	1.011169083	0.3808323053	-0.262271692

Raw Canonical Coefficients for the incent

	incent5	incent6	incent7
Incent a *	0.0792690764	0.3811829594	0.1695197736
Incent b*	0.1132738794	-0.94417243	0.4576186072
Incent c*	-0.339335472	0.6705632471	0.7110748272
Incent d	-0.303366038	0.3738032803	-0.140836366
Incent e*	1.0975119679	0.1580929937	0.0018185233
Incent f*	-0.360390986	-0.811563601	-0.628595208
Incent g	0.7240106423	-0.111751046	0.2961970373

Standardized Canonical Coefficients for the norm

norm1	norm2	norm3	norm4	norm5	norm6	norm7

Norm a	0.5396	0.1934	-0.4830	0.3014	0.3444	0.0954	0.7018
Norm b	0.3599	-0.2925	0.6911	-0.4880	0.4117	-0.3283	-0.2309
Norm c	-0.0994	0.6786	-0.1950	-0.4660	0.4213	0.1938	-0.3425
Norm d	-0.4199	-0.4438	-0.0650	-0.7066	-0.0087	0.1294	0.6519
Norm e	0.6749	-0.1242	-0.5139	-0.0588	-0.5448	0.0951	-0.5178
Norm f	-0.3282	-0.2505	0.3057	0.4879	0.2013	0.7983	-0.3841
Norm g	0.2110	0.4749	0.4613	0.0928	-0.5874	0.3196	0.3736

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.0388	0.4227	-0.3814	0.8589	0.0764	0.3674	0.1634
Incent b*	0.3101	-0.0008	0.1283	-0.0419	0.1200	-1.0000	0.4847
Incent c*	-0.3905	-0.2526	0.3794	-0.1845	-0.3401	0.6720	0.7126
Incent d	0.9156	0.0716	0.2506	0.2711	-0.1955	0.2409	-0.0908
Incent e*	0.1504	-0.4898	0.1816	0.0887	1.0328	0.1488	0.0017
Incent f*	0.0128	0.5054	0.6808	0.3234	-0.3306	-0.7445	-0.5766
Incent g	0.0968	0.8199	0.3088	-0.2127	0.5871	-0.0906	0.2402

Regression Analysis on Perceived Roles

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation
1	0.439603	0.342005	0.071587	0.193251
2	0.327948	0.195020	0.079192	0.107550
3	0.283760	.	0.081591	0.080520
4	0.186660	.	0.085644	0.034842
5	0.135459	.	0.087107	0.018349

Eigenvalues of Inv(E)*H

= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.2395	0.1190	0.4768	0.4768
2	0.1205	0.0329	0.2399	0.7166
3	0.0876	0.0515	0.1743	0.8909
4	0.0361	0.0174	0.0719	0.9628

5	0.0187	0.0372	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.62722032	1.64	35	490.4	0.0130
2	0.77746644	1.28	24	409.37	0.1743
3	0.87115966	1.11	15	326.15	0.3422
4	0.94744820	0.81	8	238	0.5909
5	0.98165085	0.75	3	120	0.5258

Multivariate Statistics and F Approximations

S=5 M=0.5 N=57

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.62722032	1.64	35	490.4	0.0130
Pillai's Trace	0.43451207	1.63	35	600	0.0135
Hotelling-Lawley Trace	0.50241691	1.65	35	317.73	0.0147
Roy's Greatest Root	0.23954282	4.11	7	120	0.0004

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Raw Canonical Coefficients for the roles

	roles1	roles2	roles3	roles4	roles5
Roles a	0.5300389077	0.771330992	-0.148219485	0.3563268793	-0.575085044
Roles b*	0.003910118	0.1777630983	-0.485459278	0.6821006112	0.5809002102
Roles c	-0.085638451	-0.199750278	-1.194300323	-0.276030782	0.2704786717
Roles d	0.4925378582	-0.857975953	0.1600031615	0.5828866811	-0.440258478
Roles e	0.7318092693	0.3178868011	0.2420651042	-0.905881086	0.7713793206

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5
Incent a *	-0.048123775	0.3262757373	-0.344897408	0.5480573813	0.4919571241
Incent b*	-0.335325082	0.6453151257	0.0279465367	0.1280120668	-0.279159375
Incent c*	0.4252212804	-0.520775649	0.3209059765	-0.016574422	0.0283903972
Incent d	1.3063346229	0.7675447744	0.0009356663	0.3297293	-0.089004756
Incent e*	0.0554302765	0.4052416076	0.0396549622	-0.854073474	0.8024322717
Incent f*	-0.373599943	0.5153530875	0.8853559055	0.4618659472	-0.542642121
Incent g	-0.300759576	0.8661558361	-0.010815946	-0.600244973	-0.556437298

Standardized Canonical Coefficients for the roles

	roles1	roles2	roles3	roles4	roles5
Roles a	0.4737	0.6893	-0.1325	0.3184	-0.5139
Roles b*	0.0042	0.1927	-0.5264	0.7396	0.6298
Roles c	-0.0769	-0.1794	-1.0729	-0.2480	0.2430
Roles d	0.4488	-0.7819	0.1458	0.5312	-0.4012
Roles e	0.5656	0.2457	0.1871	-0.7002	0.5962

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5
Incent a *	-0.0464	0.3145	-0.3324	0.5282	0.4741
Incent b*	-0.3552	0.6835	0.0296	0.1356	-0.2957
Incent c*	0.4261	-0.5219	0.3216	-0.0166	0.0285
Incent d	0.8418	0.4946	0.0006	0.2125	-0.0574
Incent e*	0.0522	0.3814	0.0373	-0.8037	0.7551
Incent f*	-0.3427	0.4728	0.8122	0.4237	-0.4978
Incent g	-0.2439	0.7023	-0.0088	-0.4867	-0.4512

Regression Analysis on Perceived Responsibility

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation
1	0.468944	0.336658	0.069222	0.219909
2	0.389956	0.265353	0.075242	0.152066
3	0.312648	0.147169	0.080062	0.097749
4	0.273206	.	0.082112	0.074641
5	0.209574	.	0.084838	0.043921
6	0.202200	.	0.085108	0.040885
7	0.128107	.	0.087279	0.016412

Eigenvalues of Inv(E)*H
= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.2819	0.1026	0.3731	0.3731
2	0.1793	0.0710	0.2374	0.6105
3	0.1083	0.0277	0.1434	0.7539
4	0.0807	0.0347	0.1068	0.8607
5	0.0459	0.0033	0.0608	0.9215
6	0.0426	0.0259	0.0564	0.9779
7	0.0167		0.0221	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.49810742	1.33	63	636.9	0.0501
2	0.63852442	1.11	48	560.07	0.2832

3	0.75303549	0.96	35	481.98	0.5358
4	0.83461841	0.89	24	402.4	0.6140
5	0.90194045	0.81	15	320.63	0.6617
6	0.94337467	0.87	8	234	0.5467
7	0.98358848	0.66	3	118	0.5806

Multivariate Statistics and F Approximations

S=7 M=0.5 N=55

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.49810742	1.33	63	636.9	0.0501
Pillai's Trace	0.64558224	1.33	63	826	0.0477
Hotelling-Lawley Trace	0.75549082	1.33	63	406.7	0.0585
Roy's Greatest Root	0.28190105	3.70	9	118	0.0004

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Raw Canonical Coefficients for the resp

	resp1	resp2	resp3	resp4
Resp a	0.7348526527	-0.428342446	0.3567432641	0.084559646
Resp b	-0.062770023	0.6006757257	0.3002803476	-0.429488287
Resp c	0.5985614385	-0.388505152	0.0369464242	-0.243237225
Resp d	-0.659233216	1.2624041489	0.2911927825	0.0099809414
Resp e	-0.032611508	-0.761145892	-0.991811578	0.5704329572
Resp f	0.4885796321	0.6087052094	-0.557124347	0.0518019971
Resp g	-0.194471032	0.2095290398	-0.507969831	-0.878167492
Resp h	-0.547166664	-0.159037595	0.311854429	0.2016448918
Resp I	0.4916916323	-0.189134428	0.5964897367	1.1091226464

Raw Canonical Coefficients for the resp

	resp5	resp6	resp7
Resp a	0.0232551035	-1.018028374	0.4848434879
Resp b	0.0920085091	-0.403208993	-0.818351221
Resp c	0.158286505	0.2306940574	0.072120727
Resp d	-0.202257965	-0.125819181	0.8018283521
Resp e	0.2268451999	-0.033855995	-0.084841951
Resp f	-0.594762855	0.1874684496	-0.356667578
Resp g	1.2380006753	0.238400631	0.0529236468
Resp h	0.1712930829	-0.264321895	-0.863208652
Resp I	0.2112590082	0.7775871322	0.308875615

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4
Incent a *	-0.983273348	0.1517363344	0.3288410782	0.1928857319
Incent b*	0.1376586964	0.2166305228	-0.457632681	0.0591372586
Incent c*	-0.017633493	-0.438106805	-0.505877713	-0.411336891
Incent d	0.1920860185	-0.068280388	0.7066691242	1.0843879419
Incent e*	0.3522251792	0.4556331114	0.6841677405	-0.740386061
Incent f*	-0.133876578	-0.88356117	0.23683971	0.4146554272
Incent g	-0.525907222	0.239646341	0.1643647767	-0.439701257

Raw Canonical Coefficients for the incent

	incent5	incent6	incent7
Incent a *	-0.02293561	-0.405882892	0.1569306227
Incent b*	0.5413572045	0.5190660109	0.6118588089
Incent c*	0.269800218	-0.763639632	-0.435522292
Incent d	0.890831323	-0.272377004	-0.161221837
Incent e*	0.3224063508	-0.191024267	0.2893191445
Incent f*	0.1043069799	0.9823648629	0.3999312084
Incent g	0.7184853655	0.7876941184	-0.428832008

Standardized Canonical Coefficients for the resp

	resp1	resp2	resp3	resp4	resp5	resp6	resp7
Resp a	0.5862	-0.3417	0.2846	0.0674	0.0185	-0.8120	0.3867
Resp b	-0.0435	0.4163	0.2081	-0.2976	0.0638	-0.2794	-0.5671
Resp c	0.4248	-0.2757	0.0262	-0.1726	0.1123	0.1637	0.0512
Resp d	-0.5904	1.1307	0.2608	0.0089	-0.1811	-0.1127	0.7181
Resp e	-0.0309	-0.7210	-0.9396	0.5404	0.2149	-0.0321	-0.0804
Resp f	0.4619	0.5754	-0.5267	0.0490	-0.5623	0.1772	-0.3372
Resp g	-0.1363	0.1468	-0.3560	-0.6154	0.8676	0.1671	0.0371
Resp h	-0.5360	-0.1558	0.3055	0.1975	0.1678	-0.2589	-0.8456
Resp l	0.3723	-0.1432	0.4516	0.8398	0.1600	0.5887	0.2339

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.9477	0.1462	0.3169	0.1859	-0.0221	-0.3912	0.1512
Incent b*	0.1458	0.2294	-0.4847	0.0626	0.5734	0.5498	0.6481
Incent c*	-0.0177	-0.4391	-0.5070	-0.4122	0.2704	-0.7653	-0.4365
Incent d	0.1238	-0.0440	0.4554	0.6988	0.5741	-0.1755	-0.1039
Incent e*	0.3315	0.4288	0.6438	-0.6967	0.3034	-0.1798	0.2723
Incent f*	-0.1228	-0.8105	0.2173	0.3804	0.0957	0.9012	0.3669
Incent g	-0.4264	0.1943	0.1333	-0.3565	0.5826	0.6387	-0.3477

Regression Analysis on Power Base

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation
1	0.560822	0.427887	0.060826	0.314521
2	0.501674	0.392002	0.066403	0.251676
3	0.433921	0.309283	0.072028	0.188287
4	0.387079	.	0.075440	0.149831
5	0.334298	0.304858	0.078819	0.111755
6	0.237343	0.160803	0.083737	0.056332
7	0.147960	0.054372	0.086793	0.021892

Eigenvalues of Inv(E)*H
= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.4588	0.1225	0.3251	0.3251
2	0.3363	0.1044	0.2383	0.5634
3	0.2320	0.0557	0.1644	0.7278
4	0.1762	0.0504	0.1249	0.8527
5	0.1258	0.0661	0.0892	0.9418
6	0.0597	0.0373	0.0423	0.9841
7	0.0224		0.0159	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.29022184	1.64	91	681.73	0.0003
2	0.42338563	1.42	72	598.83	0.0162
3	0.56577884	1.22	55	512.75	0.1416

4	0.69701847	1.06	40	422.75	0.3834
5	0.81985826	0.85	27	327.74	0.6781
6	0.92300954	0.58	16	226	0.8992
7	0.97810794	0.36	7	114	0.9211

Multivariate Statistics and F Approximations

S=7 M=2.5 N=53

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.29022184	1.64	91	681.73	0.0003
Pillai's Trace	1.09429447	1.62	91	798	0.0004
Hotelling-Lawley Trace	1.41124603	1.65	91	450.27	0.0005
Roy's Greatest Root	0.45883450	4.02	13	114	<.0001

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Raw Canonical Coefficients for the power

	power1	power2	power3	power4
Power a	0.080576258	0.4361516341	-0.187208508	0.151556179
Power b	0.4323626312	-0.565239601	0.6114788214	-0.229450859
Power c	0.508739881	0.0112218575	-0.486201738	0.4031381678
Power d	0.1478104668	-0.426131467	0.0716025441	-0.681067768
Power e	0.0486717715	0.4958256194	0.5083621157	0.627355525
Power f*	0.2490221805	0.9277077615	0.6932542229	-0.113907387
Power g	0.1253695574	0.0720319157	0.1260652129	-0.445749503
Power h	-0.581666631	0.4113288266	0.0789513997	0.1002452529
Power I*	0.092311525	0.3389530051	-1.114425975	-0.03744588
Power j	0.7540799255	0.0568333457	-0.137777087	0.0615497582
Power k	0.0208043562	0.1098303026	-0.404671047	-0.436523161
Power l*	-0.230483413	-0.282669535	-0.098328729	0.3673239701
Power m	-0.068358281	-0.187986034	0.234513092	0.9658568408

Raw Canonical Coefficients for the power

	power5	power6	power7
Power a	-0.314289065	-0.268977996	0.1157663969
Power b	-0.084863136	0.0931487348	0.5425257789
Power c	-0.297472959	0.2592107542	-0.176613198
Power d	0.2374142659	-0.03140946	0.2171219175
Power e	0.4653093299	0.1404697944	-0.344242464
Power f*	-0.267494565	0.1121424381	0.0029705112
Power g	-0.15452402	-0.84138613	0.3062393977
Power h	0.3736545586	0.3694731376	0.301303107
Power I*	0.4240960319	-0.268049461	0.5977343367
Power j	0.5028111107	-0.300013691	-0.47414026
Power k	-0.473147039	1.0437008633	0.307220646
Power l*	-0.756158782	0.3147635594	0.3705344706
Power m	-0.243900977	-0.083686236	0.8768027186

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4
Incent a *	-0.308451805	0.1238885101	0.2472360312	-0.176355862
Incent b*	0.0738942651	0.4204695343	-0.711588195	0.6112117048
Incent c*	-0.452069355	-0.353390364	0.5327932658	-0.29585247
Incent d	-0.107827635	0.7721564832	0.823665998	0.5496715827
Incent e*	0.059744987	0.9372992743	-0.137417295	-0.75547073
Incent f*	-0.450940744	0.0910052937	-0.175125313	1.1006895317
Incent g	0.527180254	0.6263797286	0.3064783535	0.4658597198

Raw Canonical Coefficients for the incent

	incent5	incent6	incent7
Incent a *	-0.786494367	0.084947888	0.7046832475
Incent b*	0.2619356438	0.2746478165	0.0971479827
Incent c*	0.5518721817	0.6744565362	0.053598506
Incent d	0.3285767413	-0.773915538	0.5614935216
Incent e*	0.0884142124	0.0514401059	-0.299801151

Incent f*	-0.448670239	-0.401405875	-0.588433169
Incent g	-0.484063216	0.7416100141	-0.330778523

Standardized Canonical Coefficients for the power

	power1	power2	power3	power4	power5	power6	power7
Power a	0.0846	0.4579	-0.1966	0.1591	-0.3300	-0.2824	0.1215
Power b	0.3450	-0.4511	0.4880	-0.1831	-0.0677	0.0743	0.4329
Power c	0.5001	0.0110	-0.4779	0.3963	-0.2924	0.2548	-0.1736
Power d	0.1191	-0.3434	0.0577	-0.5489	0.1913	-0.0253	0.1750
Power e	0.0406	0.4138	0.4243	0.5236	0.3884	0.1172	-0.2873
Power f*	0.2400	0.8942	0.6682	-0.1098	-0.2578	0.1081	0.0029
Power g	0.1176	0.0675	0.1182	-0.4180	-0.1449	-0.7890	0.2872
Power h	-0.4652	0.3289	0.0631	0.0802	0.2988	0.2955	0.2410
Power l*	0.0741	0.2719	-0.8941	-0.0300	0.3402	-0.2150	0.4795
Power j	0.6277	0.0473	-0.1147	0.0512	0.4185	-0.2497	-0.3947
Power k	0.0169	0.0892	-0.3285	-0.3543	-0.3841	0.8472	0.2494
Power l*	-0.1756	-0.2153	-0.0749	0.2798	-0.5760	0.2397	0.2822
Power m	-0.0528	-0.1452	0.1811	0.7458	-0.1883	-0.0646	0.6770

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.2973	0.1194	0.2383	-0.1700	-0.7580	0.0819	0.6792
Incent b*	0.0783	0.4453	-0.7537	0.6474	0.2774	0.2909	0.1029
Incent c*	-0.4531	-0.3542	0.5340	-0.2965	0.5531	0.6759	0.0537
Incent d	-0.0695	0.4976	0.5308	0.3542	0.2117	-0.4987	0.3618
Incent e*	0.0562	0.8820	-0.1293	-0.7109	0.0832	0.0484	-0.2821
Incent f*	-0.4137	0.0835	-0.1607	1.0097	-0.4116	-0.3682	-0.5398
Incent g	0.4275	0.5079	0.2485	0.3777	-0.3925	0.6013	-0.2682

Regression Analysis on Actual Performance

Canonical Correlation Analysis

	Adjusted	Approximate	Squared
Canonical	Canonical	Standard	Canonical

	Correlation	Correlation	Error	Correlation
1	0.511550	0.397973	0.065515	0.261684
2	0.434484	0.340088	0.071984	0.188776
3	0.332276	.	0.078939	0.110407
4	0.320879	.	0.079599	0.102963
5	0.171524	.	0.086125	0.029420
6	0.160091	.	0.086461	0.025629
7	0.086414	.	0.088073	0.007467

Eigenvalues of Inv(E)*H

= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.3544	0.1217	0.3982	0.3982
2	0.2327	0.1086	0.2614	0.6596
3	0.1241	0.0093	0.1394	0.7990
4	0.1148	0.0845	0.1289	0.9279
5	0.0303	0.0040	0.0341	0.9620
6	0.0263	0.0188	0.0295	0.9915
7	0.0075		0.0085	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.44862638	1.55	63	636.9	0.0058
2	0.60763424	1.24	48	560.07	0.1327
3	0.74903394	0.98	35	481.98	0.5051
4	0.84199660	0.85	24	402.4	0.6753
5	0.93864250	0.50	15	320.63	0.9422
6	0.96709474	0.49	8	234	0.8603
7	0.99253262	0.30	3	118	0.8283

Multivariate Statistics and F Approximations

S=7 M=0.5 N=55

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.44862638	1.55	63	636.9	0.0058
Pillai's Trace	0.72634746	1.52	63	826	0.0072
Hotelling-Lawley Trace	0.89016896	1.56	63	406.7	0.0062
Roy's Greatest Root	0.35443270	4.65	9	118	<.0001

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

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Raw Canonical Coefficients for the perform

	perform1	perform2	perform3	perform4
Perform a	0.3054887074	0.4214673951	-0.079211317	0.4972389791
Perform b	0.4893521106	0.5869783784	0.3553175804	-0.289846799
Perform c	0.4641700173	-0.371615281	-0.636740946	0.6835208676
Perform d	-0.110048335	-0.713604315	0.3120352189	-0.107123373
Perform e	-0.243544169	-0.035606711	0.2271694779	1.1004863191
Perform f	0.1167388123	0.0646770367	-1.207535908	-0.579368465
Perform g	0.0997449918	0.1515177208	0.6795460305	-0.368138099
Perform h	-0.006128246	0.805225651	0.4575628356	-0.591235582
Perform I*	-0.554419644	0.3838124334	-0.236387772	0.52038787

Raw Canonical Coefficients for the perform

	perform5	perform6	perform7
Perform a	0.9361281986	-0.757252536	0.5196594518
Perform b	-0.581252012	0.4706875721	-1.339829723
Perform c	-0.917356675	-0.05476017	0.7871043747
Perform d	1.0739551794	0.0152850764	-0.293935977
Perform e	-0.199171625	0.2331083558	-0.358345123
Perform f	0.3067989183	0.0950129231	-0.174842975
Perform g	0.4647454852	0.9224030476	0.7523396206
Perform h	-0.573684544	-0.397486115	0.5108109161
Perform I*	0.2007499652	0.3350557541	0.1108011294

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4
Incent a *	-0.069620901	-0.405366329	-0.434615692	0.7352254328
Incent b*	0.0176822963	-0.026002251	0.2717183236	0.1684193939
Incent c*	-0.19012765	0.3698880498	-0.180779883	0.4609317941
Incent d	0.9013645164	0.6924596563	0.1506595795	0.3357286519
Incent e*	-0.322543886	0.8662007467	-0.278442936	-0.010429327
Incent f*	0.0081494938	-0.392522534	1.3236405077	0.0405251686
Incent g	0.6522724754	-0.04635233	0.3752776224	0.5775756731

Raw Canonical Coefficients for the incent

	incent5	incent6	incent7
Incent a *	-0.479001633	-0.414228682	0.15950487
Incent b*	0.0681042958	0.9876376982	0.3638966834
Incent c*	0.5724592914	-0.160904453	-0.831427124
Incent d	-1.072191144	0.0379840261	-0.179423606
Incent e*	0.1010686972	-0.144302205	0.7804148119
Incent f*	-0.459014048	0.1076194419	0.1800511447
Incent g	0.6032099058	-0.121364521	0.7709185921

Standardized Canonical Coefficients for the perform

	perform1	perform2	perform3	perform4	perform5	perform6	perform7
Perform a	0.2465	0.3401	-0.0639	0.4012	0.7553	-0.6110	0.4193
Perform b	0.3793	0.4550	0.2754	-0.2247	-0.4505	0.3648	-1.0385
Perform c	0.3891	-0.3115	-0.5338	0.5730	-0.7690	-0.0459	0.6598
Perform d	-0.0907	-0.5880	0.2571	-0.0883	0.8849	0.0126	-0.2422
Perform e	-0.1512	-0.0221	0.1410	0.6831	-0.1236	0.1447	-0.2224
Perform g	0.0744	0.1130	0.5067	-0.2745	0.3466	0.6878	0.5610
Perform h	-0.0046	0.6058	0.3442	-0.4448	-0.4316	-0.2990	0.3843
Perform l*	-0.5291	0.3663	-0.2256	0.4967	0.1916	0.3198	0.1057

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.0671	-0.3907	-0.4189	0.7086	-0.4617	-0.3992	0.1537
Incent b*	0.0187	-0.0275	0.2878	0.1784	0.0721	1.0461	0.3854
Incent c*	-0.1905	0.3707	-0.1812	0.4619	0.5737	-0.1613	-0.8332
Incent d	0.5809	0.4462	0.0971	0.2164	-0.6910	0.0245	-0.1156
Incent e*	-0.3035	0.8151	-0.2620	-0.0098	0.0951	-0.1358	0.7344
Incent f*	0.0075	-0.3601	1.2142	0.0372	-0.4211	0.0987	0.1652
Incent g	0.5289	-0.0376	0.3043	0.4683	0.4891	-0.0984	0.6251

Regression Analysis on Access to Information

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation
1	0.439960	0.284696	0.071560	0.193565
2	0.403340	.	0.074300	0.162683
3	0.251210	0.125421	0.083136	0.063107
4	0.182556	0.100613	0.085778	0.033327
5	0.091763	.	0.087988	0.008420
6	0.050654	.	0.088508	0.002566
7	0.014898	.	0.088716	0.000222

Eigenvalues of Inv(E)*H
= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.2400	0.0457	0.4385	0.4385
2	0.1943	0.1269	0.3549	0.7934
3	0.0674	0.0329	0.1230	0.9164
4	0.0345	0.0260	0.0630	0.9794
5	0.0085	0.0059	0.0155	0.9949
6	0.0026	0.0024	0.0047	0.9996
7	0.0002		0.0004	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.60470636	1.24	49	583.18	0.1334
2	0.74985129	0.96	36	507.76	0.5453
3	0.89554042	0.52	25	432.42	0.9742

4	0.95586170	0.33	16	358.08	0.9934
5	0.98881582	0.15	9	287.33	0.9981
6	0.99721276	0.08	4	238	0.9875
7	0.99977805	0.03	1	120	0.8706

Multivariate Statistics and F Approximations

S=7 M=-0.5 N=56

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.60470636	1.24	49	583.18	0.1334
Pillai's Trace	0.46388965	1.22	49	840	0.1510
Hotelling-Lawley Trace	0.54743578	1.26	49	370.22	0.1246
Roy's Greatest Root	0.24002548	4.11	7	120	0.0004

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Raw Canonical Coefficients for the inform

	inform1	inform2	inform3	inform4
Inform a	-0.488018213	0.4725561507	0.603366198	0.3658439308
Inform b	0.030467961	0.0327565471	0.7688692552	-0.029984948
Inform c	-0.347270173	1.1155909527	-1.011233633	-0.803097985
Inform d	0.041953414	-0.174866705	-0.295989194	0.7915492937
Inform e	0.6967035254	-0.020244569	0.5796567978	-0.087056932
Inform f*	0.0686648739	-0.155048746	-0.327027276	0.8783694728
Inform g	0.9302003046	-0.111807314	0.0714138682	-0.262098963

Raw Canonical Coefficients for the inform

	inform5	inform6	inform7
Inform a	-0.154570922	1.0124331579	-0.074911793
Inform b	-0.701956907	-1.327528989	-0.355330765
Inform c	0.0974214749	0.0088806545	1.031180996
Inform d	0.7170574682	-0.166211345	-1.266663225
Inform e	1.080282542	0.0193627421	0.8829654246
Inform f*	-0.346132057	0.0243662314	0.4408240368
Inform g	-0.632290597	0.4598154056	-0.517767488

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4
Incent a *	-0.43442836	-0.038909436	0.4947966898	-0.074442082
Incent b*	-0.213591366	-0.28222913	0.3274714889	0.4424250615
Incent c*	-0.057616679	-0.018642988	-0.664047547	0.3697356501
Incent d	1.0894602511	0.2141428207	0.9180358592	-0.031232728
Incent e*	0.5405523431	-0.536164135	-0.196622662	0.6286983069
Incent f*	0.0340047659	-0.201878256	0.1008900364	-0.943801844
Incent g	-0.094816366	0.5627560844	-0.2720787	0.4557803492

Raw Canonical Coefficients for the incent

	incent5	incent6	incent7
Incent a *	-0.455093546	0.075361367	0.8195664304
Incent b*	0.8022515153	0.2202465503	-0.30871319
Incent c*	-0.086011089	-0.862062881	0.362070389
Incent d	0.3086703807	-0.276107831	0.6021136289
Incent e*	-0.407550651	0.6238687759	0.056233329
Incent f*	1.0118238121	0.411605687	0.1626116517
Incent g	0.5304898038	0.8295062034	0.5458890114

Standardized Canonical Coefficients for the inform

	inform1	inform2	inform3	inform4	inform5	inform6	inform7
Inform a	-0.4154	0.4022	0.5135	0.3114	-0.1316	0.8617	-0.0638
Inform b	0.0250	0.0269	0.6318	-0.0246	-0.5768	-1.0908	-0.2920
Inform c	-0.2889	0.9279	-0.8411	-0.6680	0.0810	0.0074	0.8577
Inform d	0.0363	-0.1511	-0.2558	0.6842	0.6198	-0.1437	-1.0948
Inform e	0.5056	-0.0147	0.4206	-0.0632	0.7839	0.0141	0.6407

Inform f*	0.0668	-0.1509	-0.3182	0.8547	-0.3368	0.0237	0.4289
Inform g	0.8366	-0.1006	0.0642	-0.2357	-0.5686	0.4135	-0.4656

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.4187	-0.0375	0.4769	-0.0717	-0.4386	0.0726	0.7899
Incent b*	-0.2262	-0.2989	0.3468	0.4686	0.8497	0.2333	-0.3270
Incent c*	-0.0577	-0.0187	-0.6655	0.3705	-0.0862	-0.8639	0.3629
Incent d	0.7021	0.1380	0.5916	-0.0201	0.1989	-0.1779	0.3880
Incent e*	0.5087	-0.5046	-0.1850	0.5916	-0.3835	0.5871	0.0529
Incent f*	0.0312	-0.1852	0.0926	-0.8658	0.9282	0.3776	0.1492
Incent g	-0.0769	0.4563	-0.2206	0.3696	0.4301	0.6726	0.4426

Regression Analysis on Evaluation of Performance

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard Error	Squared Canonical Correlation
1	0.619100	0.548321	0.054725	0.383284
2	0.451224	0.341677	0.070669	0.203603
3	0.331691	0.185515	0.078973	0.110019
4	0.248679	.	0.083248	0.061841
5	0.208270	.	0.084887	0.043377
6	0.175338	.	0.086008	0.030743
7	0.101308	0.033986	0.087825	0.010263

Eigenvalues of Inv(E)*H

= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	0.6215	0.3658	0.5385	0.5385
2	0.2557	0.1320	0.2215	0.7600
3	0.1236	0.0577	0.1071	0.8671
4	0.0659	0.0206	0.0571	0.9242
5	0.0453	0.0136	0.0393	0.9635
6	0.0317	0.0213	0.0275	0.9910
7	0.0104		0.0090	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.37633184	1.53	77	666.61	0.0035
2	0.61021926	0.97	60	586.62	0.5494
3	0.76622530	0.69	45	504.11	0.9401
4	0.86094558	0.54	32	418.32	0.9817
5	0.91769732	0.47	21	327.9	0.9777
6	0.95930887	0.40	12	230	0.9619
7	0.98973673	0.24	5	116	0.9437

Multivariate Statistics and F Approximations

S=7 M=1.5 N=54

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.37633184	1.53	77	666.61	0.0035
Pillai's Trace	0.84313118	1.44	77	812	0.0097
Hotelling-Lawley Trace	1.15411716	1.63	77	432.33	0.0015
Roy's Greatest Root	0.62149252	6.55	11	116	<.0001

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Raw Canonical Coefficients for the value

	value1	value2	value3	value4
Value a	-0.057043169	0.9386382239	-0.015553997	0.3127236847
Value b	0.1243730871	-1.091558319	0.6052041783	-0.299670952
Value c	-0.099965486	0.3774713294	-0.41973673	-0.479337955
Value d	-0.068634924	0.3766762595	0.1319340816	-0.396983866
Value e	-0.504156815	-0.239060428	-0.477215044	-0.142092491
Value f	0.6415739233	0.0870976941	0.6934875479	-0.992634005
Value g	0.2383646772	0.7661603486	0.5215973298	0.9717786104
Value h	0.4026852802	0.0696564807	0.1283362162	0.4809196664
Value I	0.2473776248	-0.013141927	-0.892286433	-0.008680647
Value k	0.5750007526	-0.384890017	-0.623995001	-0.179652549

Raw Canonical Coefficients for the value

	value5	value6	value7
Value a	-0.838774467	-0.708891421	-0.438097962
Value b	-0.534852113	0.4967157435	-0.302428905
Value c	0.4712369232	0.4984872968	-0.063079976
Value d	-0.000112414	0.4117269053	-0.596071926
Value e	-0.510697236	0.0788772842	0.6768215904
Value f	0.0443972368	-0.624419222	0.3252831977
Value g	-0.152787989	0.3675167571	0.5781527529
Value h	0.326171028	0.3837167246	-1.063324142
Value I	0.0107604698	0.5286816997	0.7804678748
Value j	-0.248201349	-0.171235644	0.2213943367
Value k	0.4265347312	-0.804996074	-0.549261754

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4
Incent a *	-0.056092922	-0.289556239	0.2663914418	-0.648750606
Incent b*	-0.374704132	-0.093885872	0.4875344303	0.3524974989
Incent c*	0.4138142244	-0.12825176	-0.145677433	0.6372922406
Incent d	1.1254398115	0.3669941177	0.9495797662	-0.492018573
Incent e*	0.3596404573	-0.072901897	-0.329930939	0.4669194429
Incent f*	-0.593460133	1.1717869255	0.4693652985	-0.30168255

Incent g	0.1072975432	0.2668746557	-0.489252787	-0.286500301

Raw Canonical Coefficients for the incent

	incent5	incent6	incent7
Incent a *	0.8081601483	0.2814509725	-0.117972376
Incent b*	-0.486658647	0.474012521	0.4929354671
Incent c*	0.2547750776	0.2601959731	-0.845759894
Incent d	-0.083933836	0.0025808343	0.2417950766
Incent e*	0.5325385469	-0.045641427	0.9082170655
Incent g	-0.144088761	1.1206537056	0.4406018952

Standardized Canonical Coefficients for the value

	value1	value2	value3	value4	value5	value6	value7
Value a	-0.0437	0.7188	-0.0119	0.2395	-0.6423	-0.5428	-0.3355
Value b	0.0979	-0.8592	0.4764	-0.2359	-0.4210	0.3910	-0.2380
Value c	-0.0725	0.2736	-0.3042	-0.3474	0.3416	0.3613	-0.0457
Value d	-0.0531	0.2911	0.1020	-0.3068	-0.0001	0.3182	-0.4607
Value e	-0.4548	-0.2157	-0.4305	-0.1282	-0.4607	0.0712	0.6106
Value f	0.4959	0.0673	0.5360	-0.7672	0.0343	-0.4826	0.2514
Value g	0.1609	0.5172	0.3521	0.6560	-0.1031	0.2481	0.3903
Value h	0.2744	0.0475	0.0875	0.3278	0.2223	0.2615	-0.7247
Value I	0.2271	-0.0121	-0.8192	-0.0080	0.0099	0.4854	0.7166
Value j	-0.0848	-0.3481	0.4776	0.4537	-0.2044	-0.1410	0.1823
Value k	0.4864	-0.3256	-0.5278	-0.1520	0.3608	-0.6809	-0.4646

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.0541	-0.2791	0.2567	-0.6253	0.7789	0.2713	-0.1137
Incent b*	-0.3969	-0.0994	0.5164	0.3733	-0.5154	0.5021	0.5221
Incent c*	0.4147	-0.1285	-0.1460	0.6387	0.2553	0.2608	-0.8476
Incent d	0.7253	0.2365	0.6119	-0.3171	-0.0541	0.0017	0.1558
Incent e*	0.3384	-0.0686	-0.3105	0.4394	0.5011	-0.0430	0.8547
Incent f*	-0.5444	1.0749	0.4306	-0.2767	-0.2601	0.1535	0.1214
Incent g	0.0870	0.2164	-0.3967	-0.2323	-0.1168	0.9087	0.3573

The CANCORR Procedure

Canonical Correlation Analysis

	Canonical Correlation	Adjusted Canonical Correlation	Approximate Standard	Squared Canonical Correlation
1	0.905217	0.849120	0.016024	0.819418
2	0.854768	0.770190	0.023903	0.730628
3	0.795500	0.669638	0.032582	0.632820
4	0.757442	0.622194	0.037826	0.573718
5	0.721465	0.593130	0.042548	0.520512
6	0.649773	0.478647	0.051271	0.422205
7	0.533509	0.279105	0.063479	0.284632

Eigenvalues of Inv(E)*H

= CanRsq/(1-CanRsq)

	Eigenvalue	Difference	Proportion	Cumulative
1	4.5376	1.8253	0.3620	0.3620
2	2.7123	0.9889	0.2164	0.5784
3	1.7235	0.3776	0.1375	0.7160
4	1.3459	0.2603	0.1074	0.8233
5	1.0856	0.3548	0.0866	0.9100
6	0.7307	0.3328	0.0583	0.9683
7	0.3979		0.0317	1.0000

Test of H0: The canonical correlations in the current row and all that follow are zero

	Likelihood Ratio	Approximate F Value	Num DF	Den DF	Pr > F
1	0.00150898	1.56	427	431.2	<.0001
2	0.00835620	1.27	360	373.62	0.0103
3	0.03102102	1.07	295	314.67	0.2661
4	0.08448450	0.94	232	254.38	0.6858
5	0.19818938	0.81	171	192.81	0.9241
6	0.41333573	0.64	112	130	0.9912
7	0.71536785	0.48	55	66	0.9973

Multivariate Statistics and F Approximations

S=7 M=26.5 N=29

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.00150898	1.56	427	431.2	<.0001
Pillai's Trace	3.98393384	1.43	427	462	<.0001
Hotelling-Lawley Trace	12.53346966	1.71	427	323.89	<.0001
Roy's Greatest Root	4.53764745	4.91	61	66	<.0001

NOTE: F Statistic for Roy's Greatest Root is an upper bound.

Canonical Correlation Analysis

Raw Canonical Coefficients for the 'norm, resp, power, etc'

	firstset1	firstset2	firstset3	firstset4	.. firstset5	firstset6	firstset7
Norm a	0.239663164	0.0920992626	0.2937442155	0.0804432892	0.2866681528	0.0469448536	-0.07163707
Norm b	-0.187203871	-0.022609315	-0.108812523	-0.420330415	-0.494090604	-0.180169014	0.1707585896
Norm c	0.15033982	-0.003645078	0.2441811451	0.3386616566	0.2826335387	-0.34393526	0.0583699458
Norm d	-0.046289611	-0.208965874	-0.189035228	0.0337111766	-0.169802342	0.1127374109	-0.169194748
Norm e	-0.094605363	0.1567574882	-0.165355693	-0.421634004	0.3589328702	0.1890526165	-0.101262215
Norm f	0.124800746	-0.336013213	0.4151578211	0.126513915	-0.084496999	-0.111885734	-0.003561326
Norm g	0.16712375	-0.220890872	0.0994654188	0.2144313055	0.0495783428	0.2564607554	0.079607294
Roles a	0.1387417893	0.172236627	0.1808519034	-0.232324042	-0.147219515	0.12147393	0.0018415565
Roles b*	0.0462533311	0.2118533978	0.2333201197	-0.08851967	0.2401778082	0.047245583	-0.046227762
Roles c	-0.028783744	0.032406648	-0.209204164	0.0364596477	0.3749984308	-0.102375998	-0.163863399
Roles d	0.028394989	-0.42776012	-0.014511607	-0.113264751	-0.020480545	0.5229212652	-0.345282472
Roles e	0.2384426151	-0.234165739	0.0126976949	0.0918716713	-0.115406605	0.1040825016	-0.238323167
Resp a	-0.019978647	-0.48832612	-0.02929075	-0.257087153	-0.478863227	-0.084655666	-0.063908532
Resp b	0.2600788999	0.1153619468	-0.097424442	0.5859215006	0.0363166616	-0.624028767	0.1878784019
Resp c	-0.046147499	-0.120317855	-0.011122532	-0.666340891	0.2202246173	0.1842676949	0.3101439591
Resp d	-0.054404375	0.2546279559	0.2398261244	0.3410887574	0.3849936838	-0.166951045	-0.697429454
Resp e	-0.164967939	-0.002076687	-0.01524015	-0.177280697	0.1109917364	0.4486722439	0.790435783
Resp f	-0.170896294	0.2231263052	-0.346585979	-0.372345424	0.2107720292	-0.196041479	-0.038712386
Resp g	-0.050268976	-0.143081275	-0.315088497	0.1081814865	0.3101849222	-0.082825974	0.2530855682
Resp h	0.0664373251	-0.03425841	0.3294480417	-0.038713146	-0.075429889	0.3836481989	-0.117563789
Resp I	0.1029805562	0.5132421337	-0.076132988	-0.245666998	-0.699310636	-0.154332687	-0.478221574
Power a	0.0987345866	0.0261196153	0.0512564445	-0.070944371	···. 0.0714466319	-0.362354557	-0.089454633
Power b	-0.146964656	0.0307265046	-0.408851383	0.3237140712	0.2626892286	0.1835437032	0.1343305639
Power c	-0.09412482	0.2329281933	-0.481392561	-0.273443191	-0.218124892	-0.030074754	-0.307327812
Power d	0.1004415387	-0.297948284	0.0142631987	0.3073361725	0.103810093	0.1589719299	-0.153735573
Power e	0.497994093	0.3775750954	0.0735411363	0.0352386547	0.0978435901	-0.268871406	0.1975082588
Power f*	0.5148439341	0.5806483829	-0.059595161	-0.012613248	0.1062376831	-0.431124165	-0.044008333
Power g	-0.109616267	0.0695910698	-0.004710821	-0.226873617	0.2059855752	-0.108080462	-0.361832154
Power h	0.0031872152	-0.19341264	-0.009058599	-0.147050115	0.4169945114	-0.078501927	0.4941261617
Power I*	-0.220199951	0.0444237778	0.0159846619	-0.6293829*	0.4428232326	0.0239289698	0.2694107391
Power j	-0.070483235	0.0509613957	-0.603840194	-0.315140517	0.4408771775	-0.410042179	

-0.208443779						
Power k	-0.365391661	-0.055549272	0.1567461461	0.2389739113*	-0.109813089	-0.020111211
-0.190220381						
Power l*	-0.388561328	0.20283804	0.6116326528	-0.333569255*	-0.109813089	-0.020111211
-0.190220381						
Power m	-0.171800659	0.3571086805	0.3605185594	-0.192094797	-0.4621235	0.3902045331
0.1756561318						
Perform a	0.235162728	0.1428915025	-0.062499654	0.3483169488	0.2061881893	-0.370714178
0.6563172741						
Perform b	0.2956909468	-0.071008374	0.1768527448	-0.570277262	-0.342336362	0.6137953066
-0.146050435						
Perform c	0.1320815514	0.4132233758	0.0845101023	0.5055154956	0.3554984768	0.1058672342
0.0246204793						
Perform d	-0.484912082	0.2125905547	-0.043582861	-0.124567313	-0.375689322	-0.093423631
0.1159587112						
Perform e	-0.246429583	0.2439353845	0.5342525317	-0.06629196	0.1079415832	-0.070744628
-0.169919608						
Perform f	-0.345041553	-0.02011738	-0.176999936	0.2276909889	0.1345889021	0.1114188453
0.0701390113						
Perform g	0.161197089	-0.053812427	0.3126558242	-0.080942837	-0.276962068	-0.26579426
0.3975878738						
Perform h	0.2721797184	-0.363157398	-0.374736374	-0.109537333	0.010076857	0.1733410186
-0.198468623						
Perform I*	0.0161142756	-0.255200357	0.0216571406	-0.112525544*	0.4583452937	-0.204156741
0.0226487416						
Inform a	-0.035324339	0.5037060952	0.0760193476	0.0370671392	0.0343117145	0.0341486738
0.2047021496						
Inform b	-0.008688701	-0.064969796	0.0622685722	-0.341695578	-0.59884406	0.1257574387
-0.351900417						
Inform c	0.0064174167	-0.013259316	-0.392856901	0.2557559726	0.072557107	0.444844725
0.0681159097						
Inform d	-0.217708425	-0.35131118	0.1960300275	0.3016748396	-0.159634347	-0.096433585
0.1513552701						
Inform e	0.1046130793	0.1159220283	0.0279565826	-0.305495079	0.0374014418	-0.200960771
0.2077056639						
Inform f*	-0.061367514	0.0125607711	-0.0561681	-0.130510049*	0.1816669525	-0.184712036
0.1516206854						
Inform g	0.0752975924	0.0308866634	-0.037259562	-0.146560764	0.0397110368	-0.069797389
-0.199833842						
Value a	-0.052507611	0.0040483393	0.2477231999	0.1677854409	-0.512296394	-0.205969858
-0.122027106						
Value b	-0.133415348	0.3560987453	0.0748720325	-0.502328125	0.5533989762	0.5332295917
0.3144753426						
Value c	-0.250911262	-0.309187111	-0.221927308	0.4400671904	-0.200129383	-0.100251308
0.0850270861						
Value d	0.0306469628	-0.180669563	0.3996133235	0.1586588192	0.0487557707	-0.19929716
-0.260541784						
Value e	-0.340932341	0.155017487	-0.260244175	-0.065644553	-0.372269769	-0.060409951
-0.058784123						
Value f	0.5727105169	0.2935461468	-0.136174318	0.2270156669	0.003334946	0.0935063474
-0.639419267						
Value g	-0.083493718	0.2016804216	0.2529889925	-0.13324353	-0.062467522	-0.247757798
-0.003581599						
Value h	0.541722243	-0.526049189	0.0859720841	0.1699994453	0.183895006	0.083288494
0.1920085454						
Value I	0.1777921362	-0.171317465	-0.670037366	0.2884073672	-0.189115925	-0.052702602
0.0872679273						
Value j	-0.171155299	-0.167755629	0.1256563277	-0.142766026	0.4230116456	0.2105492302
0.227542232						
Value k	0.6043177572	0.1995253869	0.0759229301	0.1668503956	0.3723052572	0.0248587331
-0.029940624						

Raw Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	0.0251375475	0.3451130674	0.7243069377	0.4673357223*	0.5369156752	0.0975947586	-0.40561634
Incent b*	-0.278379316	0.448080958	0.1492041612	-0.647930015*	-0.061322043	-0.27238391	0.6460431661
Incent c*	0.2069048791	-0.76476593	0.0333233516	0.4010021262*	0.3520620751	0.4343155464	0.6006735532
Incent d	1.2554499575	0.479639661	0.4302377788	-0.513118726	-0.182407775	0.5284301207	-0.208529869
Incent e*	0.5141261759	-0.219445247	-0.165576924	-0.227161719*	0.4812921175	-0.967662056	-0.112030154
Incent f*	-0.182441867	0.2534116258	0.6930186749	-0.188205055*	-1.230591422	-0.186930886	0.0020433501
Incent g	0.3347445727	0.7257056572	-0.002621497	0.6266277471	-0.217753917	-0.64302435	0.6186056641

Canonical Correlation Analysis

Standardized Canonical Coefficients for the 'norm, resp, power, etc'

	firstset1	firstset2	firstset3	firstset4	firstset5	firstset6	firstset7
Norm a	0.2566	0.0986	0.3145	0.0861	0.3070	0.0503	-0.0767
Norm b	-0.1449	-0.0175	-0.0842	-0.3254	-0.3825	-0.1395	0.1322
Norm c	0.1736	-0.0042	0.2820	0.3911	0.3264	-0.3972	0.0674
Norm d	-0.0423	-0.1908	-0.1726	0.0308	-0.1550	0.1029	-0.1545
Norm e	-0.0883	0.1463	-0.1543	-0.3934	0.3349	0.1764	-0.0945
Norm f	0.1180	-0.3176	0.3924	0.1196	-0.0799	-0.1058	-0.0034
Norm g	0.1567	-0.2072	0.0933	0.2011	-0.1316	0.1086	0.0016
Roles a	0.1240	0.1539	0.1616	-0.2076	-0.1316	0.1086	0.0016
Roles b*	0.0502	0.2297	0.2530	-0.0960*	0.2604	0.0512	-0.0501
Roles c	-0.0259	0.0291	-0.1879	0.0328	0.3369	-0.0920	-0.1472
Roles d	0.0259	-0.3898	-0.0132	-0.1032	-0.0187	0.4765	-0.3147
Roles e	0.1843	-0.1810	0.0098	0.0710	-0.0892	0.0804	-0.1842
Resp a	-0.0159	-0.3895	-0.0234	-0.2051	-0.3820	-0.0675	-0.0510
Resp b	0.1802	0.0799	-0.0675	0.4060	0.0252	-0.4325	0.1302
Resp c	-0.0328	-0.0854	-0.0079	-0.4729	0.1563	0.1308	0.2201
Resp d	-0.0487	0.2281	0.2148	0.3055	0.3448	-0.1495	-0.6246
Resp e	-0.1563	-0.0020	-0.0144	-0.1679	0.1051	0.4250	0.7488
Resp f	-0.1616	0.2109	-0.3276	-0.3520	0.1993	-0.1853	-0.0366
Resp g	-0.0352	-0.1003	-0.2208	0.0758	0.2174	-0.0580	0.1774
Resp h	0.0651	-0.0336	0.3227	-0.0379	-0.0739	0.3758	-0.1152
Resp I	0.0780	0.3886	-0.0576	-0.1860	-0.5295	-0.1169	-0.3621
Power a	0.1037	0.0274	0.0538	-0.0745	0.0750	-0.3804	-0.0939
Power b	-0.1173	0.0245	-0.3263	0.2583	0.2096	0.1465	0.1072
Power c	-0.0925	0.2290	-0.4732	-0.2688	-0.2144	-0.0296	-0.3021
Power d	0.0810	-0.2401	0.0115	0.2477	0.0837	0.1281	-0.1239
Power e	0.4156	0.3151	0.0614	0.0294	0.0817	-0.2244	0.1648
Power f*	0.4963	0.5597	-0.0574	-0.0122*	0.1024	-0.4156	-0.0424
Power g	-0.1028	0.0653	-0.0044	-0.2127	0.1932	-0.1014	-0.3393
Power h	0.0025	-0.1547	-0.0072	-0.1176	0.3335	-0.0628	0.3952
Power I*	-0.1767	0.0356	0.0128	-0.5049*	0.3553	0.0192	0.2161
Power j	-0.0587	0.0424	-0.5026	-0.2623	-0.3400	0.0675	0.3319
Power k	-0.2966	-0.0451	0.1272	0.1940	0.3579	-0.3328	-0.1692
Power l*	-0.2960	0.1545	0.4659	-0.2541*	-0.0836	-0.0153	-0.1449
Power m	-0.1327	0.2757	0.2784	-0.1483	-0.3568	0.3013	0.1356
Perform a	0.1897	0.1153	-0.0504	0.2810	0.1664	-0.2991	0.5296
Perform b	0.2292	-0.0550	0.1371	-0.4420	-0.2654	0.4758	-0.1132
Perform c	0.1107	0.3464	0.0708	0.4238	0.2980	0.0887	0.0206
Perform d	-0.3995	0.1752	-0.0359	-0.1026	-0.3095	-0.0770	0.0955
Perform e	-0.1530	0.1514	0.3316	-0.0411	0.0670	-0.0439	-0.1055

Perform f	-0.3046	-0.0178	-0.1563	0.2010	0.1188	0.0984	0.0619
Perform g	0.1202	-0.0401	0.2331	-0.0604	-0.2065	-0.1982	0.2965
Perform h	0.2048	-0.2732	-0.2819	-0.0824	0.0076	0.1304	-0.1493
Perform 1*	0.0154	-0.2436	0.0207	-0.1074*	0.4374	-0.1948	0.0216
Inform a	-0.0301	0.4287	0.0647	0.0315	0.0292	0.0291	0.1742
Inform b	-0.0071	-0.0534	0.0512	-0.2808	-0.4920	0.1033	-0.2891
Inform c	0.0053	-0.0110	-0.3268	0.2127	0.0604	0.3700	0.0567
Inform d	-0.1882	-0.3036	0.1694	0.2607	-0.1380	-0.0833	0.1308
Inform e	0.0759	0.0841	0.0203	-0.2217	0.0271	-0.1458	0.1507
Inform f*	-0.0597	0.0122	-0.0547	-0.1270*	0.1768	-0.1797	0.1475
Inform g	0.0677	0.0278	-0.0335	-0.1318	0.0357	-0.0628	-0.1797
Value a	-0.0402	0.0031	0.1897	0.1285	-0.3923	-0.1577	-0.0934
Value b	-0.1050	0.2803	0.0589	-0.3954	0.4356	0.4197	0.2475
Value c	-0.1819	-0.2241	-0.1609	0.3190	-0.1451	-0.0727	0.0616
Value d	0.0237	-0.1396	0.3089	0.1226	0.0377	-0.1540	-0.2014
Value e	-0.3076	0.1399	-0.2348	-0.0592	-0.3359	-0.0545	-0.0530
Value f	0.4426	0.2269	-0.1052	0.1755	0.0026	0.0723	-0.4942
Value g	-0.0564	0.1361	0.1708	-0.0899	-0.0422	-0.1673	-0.0024
Value h	0.3692	-0.3585	0.0586	0.1159	0.1253	0.0568	0.1309
Value I	0.1632	-0.1573	-0.6152	0.2648	-0.1736	-0.0484	0.0801
Value j	-0.1409	-0.1381	0.1035	-0.1176	0.3483	0.1734	0.1874
Value k	0.5112	0.1688	0.0642	0.1411	0.3149	0.0210	-0.0253

Standardized Canonical Coefficients for the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	0.0242	0.3326	0.6981	0.4504	0.5175	0.0941	-0.3909
Incent b*	-0.2948	0.4746	0.1580	-0.6863	-0.0649	-0.2885	0.6843
Incent c*	0.2074	-0.7664	0.0334	0.4019	0.3528	0.4353	0.6020
Incent d	0.8091	0.3091	0.2773	-0.3307	-0.1175	0.3405	-0.1344
Incent e*	0.4838	-0.2065	-0.1558	-0.2138	0.4529	-0.9106	-0.1054
Incent f*	-0.1674	0.2325	0.6357	-0.1727	-1.1289	-0.1715	0.0019
Incent g	0.2714	0.5884	-0.0021	0.5081	-0.1766	-0.5214	0.5016

Canonical Structure

Correlations Between the 'norm, resp, power, etc' and Their Canonical Variables

	firstset1	firstset2	firstset3	firstset4	firstset5	firstset6	firstset7
Norm a	0.2119	0.2015	-0.0211	-0.1678	0.1352	-0.0002	-0.1171
Norm b	0.3214	0.0232	-0.0764	-0.2617	-0.0902	-0.0613	0.1577
Norm c	-0.0062	0.1949	-0.1365	0.2706	-0.0717	-0.0175	0.0816
Norm d	-0.0416	-0.1560	-0.2443	-0.0418	0.0995	0.2309	-0.1010
Norm e	0.1451	0.0970	-0.1766	-0.2440	0.0888	-0.0497	-0.0711
Norm f	0.1069	-0.1320	0.0172	-0.0561	-0.2283	0.1207	0.1929
Norm g	0.1775	0.0875	0.0748	0.0799	0.0304	0.1374	0.0967
Roles a	0.2626	0.1994	0.0394	-0.0931*	0.0927	0.0638	-0.0954
Roles b*	0.0011	0.0132	0.1658	-0.0705	0.1790	0.1295	-0.1023
Roles c	0.0176	0.1082	-0.2466	0.0396	0.0243	0.4341	-0.1106
Roles d	0.1745	-0.1939	-0.1123	-0.0263	0.0623	0.1633	-0.0485
Roles e	0.3520	-0.1205	-0.0278	-0.0903	0.1160	0.1155	-0.0166
Resp a	0.1463	-0.0896	-0.1136	-0.2593	0.1242	0.0060	0.0175
Resp b	0.1572	-0.0121	-0.1835	-0.1464	0.0157	-0.0133	-0.0009
Resp c	0.1456	-0.0194	-0.2197	-0.2434	0.2824	0.1137	-0.0505
Resp d	0.0255	0.2324	-0.0268	-0.0958	0.0936	0.3205	0.1904
Resp e	-0.0308	0.0647	0.0326	-0.0996	0.1123	0.1195	0.0603
Resp f	-0.0084	0.0869	-0.3444	-0.2406	0.1127	-0.0571	0.3064

Resp g	0.0850	0.0965	-0.0933	-0.1222	0.1058	0.1580	-0.0809
Resp h	0.1154	0.1755	0.0350	0.0409	0.1058	0.1580	-0.0809
Resp I	0.1688	0.1530	-0.1079	-0.2526	-0.0713	0.0475	-0.0551
Power a	0.0397	0.2183	-0.0459	-0.0174	-0.0801	-0.0332	-0.1343
Power b	-0.0258	0.1575	-0.2505	0.2477	-0.0411	0.2723	-0.0770
Power c	-0.1084	0.3305	-0.3353	0.0610	-0.1333	0.0131	0.0594
Power d	0.0371	-0.0021	-0.2674	-0.0401	0.1436	0.0677	0.0949
Power e	0.1626	0.0960	-0.1648	-0.0409	-0.1385	0.1862	0.3201
Power f*	0.2036	0.1067	0.1295	0.0099*	0.1748	-0.4128	-0.0511
Power g	0.1688	0.0601	-0.2288	0.0420	0.0169	0.1315	-0.1985
Power h	0.2170	-0.0495	-0.0133	-0.0264	0.0346	0.1540	0.1679
Power I*	-0.1162	0.0254	0.1170	-0.3013*	0.1336	-0.2479	0.0639
Power j	0.1612	0.1381	-0.3713	-0.0240	0.0716	0.0107	0.1143
Power k	0.0636	0.0683	-0.2522	0.0634	0.2200	-0.0345	0.1617
Power l*	-0.0480	-0.0453	0.2878	0.0941*	-0.0554	-0.1065	-0.0830
Power m	0.0620	0.1400	-0.0682	-0.0625	-0.0203	0.2073	0.1928
Perform a	0.3592	0.1370	-0.1128	0.1137	-0.0047	0.0561	0.2763
Perform b	0.3206	0.2070	-0.1179	-0.0258	-0.0974	0.1728	0.2813
Perform c	0.1402	0.3702	-0.0453	0.0800	-0.0158	0.2062	0.1454
Perform d	-0.0283	0.2149	-0.0813	0.0995	-0.1540	0.1137	0.1628
Perform e	0.1782	0.1002	0.0009	0.0067	0.0749	0.0653	0.1756
Perform f	0.1270	0.0911	-0.2840	-0.0669	0.2186	0.1034	-0.0195
Perform g	0.1270	0.1814	-0.1457	-0.0886	-0.1040	0.0419	0.2272
Perform h	0.1939	-0.0519	-0.1264	-0.1318	-0.0855	-0.0904	-0.0291
Perform l*	-0.0311	-0.2829	0.1799	-0.1476*	0.2321	-0.2246	0.1308
Inform a	0.0242	0.2931	-0.1505	0.1345	0.0418	0.1973	0.0277
Inform b	0.1417	0.1950	-0.1754	0.0721	-0.0068	0.2205	-0.0280
Inform c	0.1654	0.1382	-0.2929	0.2415	-0.1459	0.1924	0.0663
Inform d	0.1654	0.0987	-0.2221	0.1080	-0.0756	0.1043	0.1414
Inform e	0.2865	0.1196	-0.1298	-0.1025	-0.0983	0.1060	-0.0361
Inform f*	0.1666	-0.0270	-0.1373	0.0014*	0.0810	-0.0493	0.1196
Inform g	0.3547	-0.0023	-0.2197	-0.0347	-0.1585	0.0450	-0.1398
Value a	0.1513	-0.0196	-0.1685	0.0005	-0.2457	0.0878	0.0901
Value b	0.1627	0.1464	-0.1452	-0.0315	0.1368	0.2434	0.1732
Value c	0.2254	0.0595	-0.0158	0.1153	-0.1033	0.0556	0.0141
Value d	0.1400	0.0624	-0.0541	0.1347	-0.1021	0.0499	0.0164
Value e	0.0921	0.0789	-0.1984	0.0638	-0.0753	0.0258	0.0160
Value f	0.4793	0.0787	-0.0495	-0.0432	-0.0294	0.2160	-0.1029
Value g	0.4595	-0.0523	-0.0270	-0.0606	-0.1009	0.0926	0.1583
Value h	0.4467	-0.0533	-0.1549	0.0337	0.0640	0.1487	0.1813
Value I	0.4003	-0.0017	-0.2830	0.1089	0.1097	0.0545	0.1478
Value j	0.2281	-0.0081	-0.1967	-0.0709	0.2554	0.1397	0.0974
Value k	0.3761	-0.0502	-0.3012	0.0967	0.1686	0.1442	-0.0235

Correlations Between the incent and Their Canonical Variables

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Incent a *	-0.1866	0.1551	0.7989	0.1917	0.4883	-0.0550	-0.1570
Incent b*	-0.2809	0.2391	0.3136	-0.5677	0.3570	-0.0113	0.5618
Incent c*	0.1991	-0.6072	0.4583	0.1405	0.0682	0.0977	0.5897
Incent d	0.8074	0.2584	0.0441	-0.3262	-0.0544	0.4123	0.0000
Incent e*	0.3086	-0.4589	0.2646	-0.2145	0.1530	-0.7350	-0.1203
Incent f*	-0.0112	-0.4213	0.6383	0.0150	-0.5678	-0.3025	-0.0264
Incent g	0.2800	0.4977	-0.2901	0.6227	-0.1686	-0.1875	0.3720

Canonical Structure

Correlations Between the 'norm, resp, power, etc' and the Canonical Variables of the incent

	incent1	incent2	incent3	incent4	incent5	incent6	incent7
Norm a	0.1918	0.1722	-0.0168	-0.1271	0.0976	-0.0001	-0.0625
Norm b	0.2910	0.0198	-0.0607	-0.1982	-0.0651	-0.0399	0.0841
Norm c	-0.0056	0.1666	-0.1086	0.2049	-0.0517	-0.0114	0.0435
Norm d	-0.0377	-0.1334	-0.1944	-0.0317	0.0475	0.0386	0.0134
Norm e	0.1313	0.0829	-0.1405	-0.1849	0.0718	0.1500	-0.0539
Norm f	0.0968	-0.1128	0.0137	-0.0425	0.0640	-0.0323	-0.0380
Norm g	0.1607	0.0748	0.0595	0.0605	-0.1647	0.0784	0.1029
Roles a	0.2377	0.1704	0.0314	-0.0705	0.0219	0.0893	0.0516
Roles b*	0.0010	0.0113	0.1319	-0.0534	0.0669	0.0414	-0.0509
Roles c	0.0159	0.0925	-0.1962	0.0300	0.1291	0.0842	-0.0546
Roles d	0.1579	-0.1657	-0.0893	-0.0199	0.0176	0.2821	-0.0590
Roles e	0.3187	-0.1030	-0.0221	-0.0684	0.0450	0.1061	-0.0259
Resp a	0.1325	-0.0766	-0.0904	-0.1964	0.0837	0.0750	-0.0089
Resp b	0.1423	-0.0104	-0.1460	-0.1109	0.0896	0.0039	0.0093
Resp c	0.1318	-0.0166	-0.1748	-0.1844	0.0113	-0.0087	-0.0005
Resp d	0.0231	0.1987	-0.0213	-0.0726	0.2038	0.0739	-0.0269
Resp e	-0.0278	0.0553	0.0260	-0.0754	0.0675	0.2083	0.1016
Resp f	-0.0076	0.0743	-0.2740	-0.1822	0.0810	0.0777	0.0322
Resp g	0.0769	0.0825	-0.0742	-0.0925	0.0813	-0.0371	0.1635
Resp h	0.1044	0.1500	0.0279	0.0310	0.0763	0.1027	-0.0432
Resp l	0.1528	0.1308	-0.0859	-0.1913	-0.0514	0.0309	-0.0294
Power a	0.0360	0.1866	-0.0366	-0.0132	-0.0578	-0.0216	-0.0716
Power b	-0.0233	0.1346	-0.1993	0.1876	-0.0297	0.1770	-0.0411
Power c	-0.0981	0.2825	-0.2667	0.0462	-0.0962	0.0085	0.0317
Power d	0.0336	-0.0018	-0.2127	-0.0304	0.1036	0.0440	0.0506
Power e	0.1472	0.0821	-0.1311	-0.0310	-0.0999	0.1210	0.1708
Power f*	0.1843	0.0912	0.1030	0.0075	0.1261	-0.2682	-0.0272
Power g	0.1528	0.0513	-0.1820	0.0318	0.0122	0.0855	-0.1059
Power h	0.1964	-0.0423	-0.0106	-0.0200	0.0249	0.1001	0.0896
Power l*	-0.1052	0.0217	0.0931	-0.2282	0.0964	-0.1611	0.0341
Power j	0.1459	0.1181	-0.2954	-0.0182	0.0517	0.0069	0.0610
Power k	0.0575	0.0584	-0.2007	0.0480	0.1587	-0.0224	0.0863
Power l*	-0.0434	-0.0387	0.2289	0.0713	-0.0400	-0.0692	-0.0443
Power m	0.0561	0.1197	-0.0543	-0.0473	-0.0146	0.1347	0.1029
Perform a	0.3252	0.1171	-0.0897	0.0861	-0.0034	0.0365	0.1474
Perform b	0.2902	0.1770	-0.0938	-0.0196	-0.0703	0.1123	0.1501
Perform c	0.1269	0.3164	-0.0360	0.0606	-0.0114	0.1340	0.0776
Perform d	-0.0256	0.1837	-0.0646	0.0753	-0.1111	0.0739	0.0869
Perform e	0.1613	0.0857	0.0007	0.0050	0.0540	0.0424	0.0937
Perform f	0.1149	0.0779	-0.2259	-0.0507	0.1577	0.0672	-0.0104
Perform g	0.1150	0.1551	-0.1159	-0.0671	-0.0751	0.0272	0.1212
Perform h	0.1756	-0.0444	-0.1005	-0.0999	-0.0617	-0.0587	-0.0155
Perform I*	-0.0281	-0.2418	0.1431	-0.1118	0.1675	-0.1459	0.0698
Inform a	0.0219	0.2505	-0.1197	0.1019	0.0302	0.1282	0.0148
Inform b	0.1283	0.1667	-0.1396	0.0546	-0.0049	0.1433	-0.0149
Inform c	0.1497	0.1181	-0.2330	0.1830	-0.1053	0.1250	0.0354
Inform d	0.1498	0.0844	-0.1767	0.0818	-0.0546	0.0678	0.0755
Inform e	0.2594	0.1023	-0.1033	-0.0776	-0.0709	0.0689	-0.0192
Inform f*	0.1508	-0.0231	-0.1092	0.0010	0.0584	-0.0320	0.0638
Inform g	0.3211	-0.0020	-0.1748	-0.0263	-0.1144	0.0292	-0.0746
Value a	0.1370	-0.0167	-0.1340	0.0004	-0.1773	0.0571	0.0481
Value b	0.1473	0.1251	-0.1155	-0.0239	0.0987	0.1581	0.0924
Value c	0.2040	0.0508	-0.0126	0.0873	-0.0745	0.0361	0.0075
Value d	0.1267	0.0533	-0.0431	0.1020	-0.0737	0.0324	0.0088
Value e	0.0833	0.0674	-0.1578	0.0483	-0.0543	0.0167	0.0085
Value f	0.4338	0.0672	-0.0394	-0.0327	-0.0212	0.1403	-0.0549
Value g	0.4160	-0.0447	-0.0215	-0.0459	-0.0728	0.0601	0.0845
Value h	0.4043	-0.0455	-0.1232	0.0255	0.0462	0.0966	0.0967
Value l	0.3623	-0.0015	-0.2251	0.0825	0.0791	0.0354	0.0789
Value j	0.2065	-0.0069	-0.1565	-0.0537	0.1842	0.0908	0.0519
Value k	0.3404	-0.0429	-0.2396	0.0732	0.1216	0.0937	-0.0126

Correlations Between the incent and the Canonical Variables of the 'norm, resp, power, etc'

	firstset1	firstset2	firstset3	firstset4	firstset5	firstset6	firstset7
Incent a *	-0.1690	0.1325	0.6355	0.1452	0.3523	-0.0357	-0.0838
Incent b*	-0.2543	0.2044	0.2495	-0.4300	0.2576	-0.0074	0.2997
Incent c*	0.1802	-0.5190	0.3645	0.1065	0.0492	0.0635	0.3146
Incent d	0.7309	0.2209	0.0351	-0.2471	0.0392	0.2679	0.0000
Incent e*	0.2793	-0.3923	0.2105	-0.1625	0.1104	-0.4776	-0.0642
Incent f*	-0.0102	-0.3601	0.5078	0.0113	-0.4097	-0.1966	-0.0141
Incent g	0.2535	0.4254	-0.2308	0.4717	-0.1216	-0.1218	0.1984

Canonical Redundancy Analysis

Raw Variance of the norm, resp, power, etc.
Explained by

	Their Own Canonical Variables			The Opposite Canonical Variables	
	Proportion	Cumulative Proportion	Canonical R-Squared	Proportion	Cumulative Proportion
1	0.0375	0.0375	0.8194	0.0307	0.0307
2	0.0220	0.0594	0.7306	0.0160	0.0468
3	0.0319	0.0913	0.6328	0.0202	0.0669
4	0.0166	0.1079	0.5737	0.0095	0.0765
5	0.0158	0.1237	0.5205	0.0082	0.0847
6	0.0248	0.1485	0.4222	0.0105	0.0951
7	0.0168	0.1653	0.2846	0.0048	0.0999

Raw Variance of the Incent

Explained by

	Their Own Canonical Variables			The Opposite Canonical Variables	
	Proportion	Cumulative Proportion	Canonical R-Squared	Proportion	Cumulative Proportion
1	0.0969	0.0969	0.8194	0.0794	0.0794
2	0.1679	0.2649	0.7306	0.1227	0.2021

3	0.2349	0.4997	0.6328	0.1486	0.3507
4	0.1291	0.6288	0.5737	0.0740	0.4248
5	0.1163	0.7451	0.5205	0.0605	0.4853
6	0.1130	0.8581	0.4222	0.0477	0.5331
7	0.1419	1.0000	0.2846	0.0404	0.5734

Standardized Variance of the norm, resp, power, etc.

	Explained by			
	Their Own Canonical Variables		The Opposite Canonical Variables	
	Proportion	Cumulative Proportion	Canonical R-Squared	Cumulative Proportion
1	0.0418	0.0418	0.8194	0.0343	0.0343
2	0.0202	0.0620	0.7306	0.0147	0.0490
3	0.0311	0.0931	0.6328	0.0197	0.0687
4	0.0165	0.1096	0.5737	0.0095	0.0782
5	0.0154	0.1250	0.5205	0.0080	0.0862
6	0.0239	0.1489	0.4222	0.0101	0.0963
7	0.0179	0.1667	0.2846	0.0051	0.1013

Standardized Variance of the Incent

	Explained by			
	Their Own Canonical Variables		The Opposite Canonical Variables	
	Proportion	Cumulative Proportion	Canonical R-Squared	Cumulative Proportion
1	0.1399	0.1399	0.8194	0.1146	0.1146
2	0.1646	0.3045	0.7306	0.1203	0.2349
3	0.2157	0.5203	0.6328	0.1365	0.3714
4	0.1313	0.6516	0.5737	0.0753	0.4468
5	0.1068	0.7584	0.5205	0.0556	0.5024
6	0.1214	0.8798	0.4222	0.0512	0.5536
7	0.1202	1.0000	0.2846	0.0342	0.5878

Canonical Redundancy Analysis

Squared Multiple Correlations Between the norm, resp, power, etc. and the First 'M' Canonical Variables of the Incent

M	1	2	3	4	5	6	7
NORMA	0.0368	0.0665	0.0667	0.0829	0.0924	0.0924	0.0963
NORMB	0.0847	0.0851	0.0888	0.1280	0.1323	0.1339	0.1409
NORMC	0.0000	0.0278	0.0396	0.0816	0.0843	0.0844	0.0863
NORMD	0.0014	0.0192	0.0570	0.0580	0.0602	0.0617	0.0619
NORME	0.0172	0.0241	0.0439	0.0780	0.0832	0.1057	0.1086
NORMF	0.0094	0.0221	0.0223	0.0241	0.0282	0.0292	0.0307
NORMG	0.0258	0.0314	0.0350	0.0386	0.0657	0.0719	0.0825
ROLESA	0.0565	0.0856	0.0865	0.0915	0.0920	0.1000	0.1026
ROLESB	0.0000	0.0001	0.0175	0.0204	0.0248	0.0266	0.0291
ROLESC	0.0003	0.0088	0.0473	0.0482	0.0649	0.0719	0.0749
ROLESD	0.0249	0.0524	0.0604	0.0608	0.0611	0.1407	0.1441
ROLESE	0.1015	0.1122	0.1126	0.1173	0.1194	0.1306	0.1313
RESPA	0.0175	0.0234	0.0316	0.0702	0.0772	0.0828	0.0829
RESPB	0.0203	0.0204	0.0417	0.0540	0.0620	0.0620	0.0621
RESPC	0.0174	0.0176	0.0482	0.0822	0.0823	0.0824	0.0824
RESPD	0.0005	0.0400	0.0405	0.0457	0.0872	0.0927	0.0934
RESPE	0.0008	0.0038	0.0045	0.0102	0.0148	0.0581	0.0684
RESPF	0.0001	0.0056	0.0806	0.1139	0.1204	0.1265	0.1275
RESPG	0.0059	0.0127	0.0182	0.0268	0.0334	0.0348	0.0615
RESPH	0.0109	0.0334	0.0342	0.0351	0.0410	0.0515	0.0534
RESPI	0.0234	0.0405	0.0478	0.0844	0.0871	0.0880	0.0889
POWERA	0.0013	0.0361	0.0375	0.0376	0.0410	0.0414	0.0466
POWERB	0.0005	0.0187	0.0584	0.0936	0.0945	0.1258	0.1275
POWERC	0.0096	0.0894	0.1606	0.1627	0.1720	0.1721	0.1731
POWERD	0.0011	0.0011	0.0464	0.0473	0.0580	0.0600	0.0625
POWERE	0.0217	0.0284	0.0456	0.0466	0.0565	0.0712	0.1003
POWERF	0.0340	0.0423	0.0529	0.0530	0.0689	0.1408	0.1416
POWERG	0.0233	0.0260	0.0591	0.0601	0.0603	0.0676	0.0788
POWERH	0.0386	0.0404	0.0405	0.0409	0.0415	0.0515	0.0595
POWERI	0.0111	0.0115	0.0202	0.0723	0.0816	0.1075	0.1087
POWERJ	0.0213	0.0352	0.1225	0.1228	0.1255	0.1255	0.1292
POWERK	0.0033	0.0067	0.0470	0.0493	0.0745	0.0750	0.0824

POWERL	0.0019	0.0034	0.0558	0.0609	0.0625	0.0673	0.0692
POWERM	0.0032	0.0175	0.0204	0.0227	0.0229	0.0410	0.0516
PERFORMA	0.1057	0.1195	0.1275	0.1349	0.1349	0.1363	0.1580
PERFORMB	0.0842	0.1155	0.1243	0.1247	0.1296	0.1422	0.1648
PERFORMC	0.0161	0.1162	0.1175	0.1212	0.1213	0.1393	0.1453
PERFORMD	0.0007	0.0344	0.0386	0.0442	0.0566	0.0621	0.0696
PERFORME	0.0260	0.0334	0.0334	0.0334	0.0363	0.0381	0.0469
PERFORMF	0.0132	0.0193	0.0703	0.0729	0.0978	0.1023	0.1024
PERFORMG	0.0132	0.0373	0.0507	0.0552	0.0608	0.0616	0.0763
PERFORMH	0.0308	0.0328	0.0429	0.0529	0.0567	0.0601	0.0604
PERFORMI	0.0008	0.0593	0.0798	0.0923	0.1203	0.1416	0.1465
INFORMA	0.0005	0.0632	0.0776	0.0880	0.0889	0.1053	0.1055
INFORMB	0.0165	0.0442	0.0637	0.0667	0.0667	0.0873	0.0875
INFORMC	0.0224	0.0364	0.0906	0.1241	0.1352	0.1508	0.1521
INFORMD	0.0224	0.0295	0.0607	0.0674	0.0704	0.0750	0.0807
INFORME	0.0673	0.0777	0.0884	0.0944	0.0995	0.1042	0.1046
INFORMF	0.0227	0.0233	0.0352	0.0352	0.0386	0.0396	0.0437
INFORMG	0.1031	0.1031	0.1337	0.1343	0.1474	0.1483	0.1538
VALUEA	0.0188	0.0190	0.0370	0.0370	0.0684	0.0717	0.0740
VALUEB	0.0217	0.0374	0.0507	0.0513	0.0610	0.0860	0.0946
VALUEC	0.0416	0.0442	0.0444	0.0520	0.0576	0.0589	0.0589
VALUED	0.0161	0.0189	0.0208	0.0312	0.0366	0.0376	0.0377
VALUEE	0.0069	0.0115	0.0364	0.0387	0.0417	0.0420	0.0420
VALUEF	0.1882	0.1927	0.1943	0.1954	0.1958	0.2155	0.2185
VALUEG	0.1730	0.1750	0.1755	0.1776	0.1829	0.1865	0.1936
VALUEH	0.1635	0.1656	0.1807	0.1814	0.1835	0.1929	0.2022
VALUEI	0.1313	0.1313	0.1820	0.1888	0.1950	0.1963	0.2025
VALUEJ	0.0426	0.0427	0.0672	0.0701	0.1040	0.1123	0.1149
VALUEK	0.1159	0.1177	0.1751	0.1805	0.1953	0.2041	0.2042

Canonical Redundancy Analysis

Squared Multiple Correlations Between the Incent and the First 'M' Canonical Variables of the norm, resp, power, etc.

M	1	2	3	4	5	6	7
INCENTA	0.0285	0.0461	0.4500	0.4711	0.5952	0.5965	0.6035
INCENTB	0.0647	0.1064	0.1687	0.3536	0.4200	0.4200	0.5099
INCENTC	0.0325	0.3018	0.4347	0.4461	0.4485	0.4525	0.5515
INCENTD	0.5342	0.5830	0.5842	0.6452	0.6468	0.7186	0.7186
INCENTE	0.0780	0.2319	0.2762	0.3026	0.3148	0.5429	0.5470
INCENTF	0.0001	0.1298	0.3877	0.3878	0.5556	0.5943	0.5945
INCENTG	0.0643	0.2452	0.2985	0.5210	0.5358	0.5506	0.5900

Cronbach's Alpha App. IV

Norm

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	NORMA	3.4453	1.0708	128.0
2.	NORMB	4.1953	.7742	128.0
3.	NORMC	3.5703	1.1548	128.0
4.	NORMD	3.7813	.9131	128.0
5.	NORME	3.6641	.9330	128.0
6.	NORMF	3.8594	.9452	128.0
7.	NORMG	3.5469	.9379	128.0

Covariance Matrix

	NORMA	NORMB	NORMC	NORMD	NORME	NORMF	NORMG
NORMA	1.1466						
NORMB	.3060	.5993					
NORMC	.0826	.0295	1.3336				
NORMD	.1218	.0667	.1809	.8337			
NORME	.1350	.1527	.1380	.3669	.8705		
NORMF	.3623	.2009	.1281	.2761	.2752	.8935	
NORMG	.0065	.1364	.1660	.1127	.0828	.0696	.8797

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	26.0625	13.3504	3.6538	7

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.7232	3.4453	4.1953	.7500	1.2177	.0633

Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.9367	.5993	1.3336	.7343	2.2251	.0559

Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.1618	.0065	.3669	.3604	56.2642	.0102

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.1809	.0065	.4307	.4242	66.3309	.0137

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	242.2143	127	1.9072		
Within People	639.1429	768	.8322		
Between Measures	48.6384	6	8.1064	10.4607	.0000
Residual	590.5045	762	.7749		
Total	881.3571	895	.9848		
Grand Mean	3.7232				

Reliability Coefficients 7 items

Alpha = .5937 Standardized item alpha = .6072

Roles

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	ROLEA	4.2734	.8937	128.0
2.	ROLEB	3.2109	1.0843	128.0
3.	ROLEC	3.2578	.8983	128.0
4.	ROLED	3.3594	.9113	128.0
5.	ROLEE	3.6797	.7729	128.0

Covariance Matrix

ROLEA	ROLEB	ROLEC	ROLED	ROLEE

ROLEA	.7987				
ROLEB	-.1684	1.1756			
ROLEC	.1967	-.3934	.8070		
ROLED	.0427	.0496	.1586	.8305	
ROLEE	.0568	.1390	.0124	.2971	.5974

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	17.7813	4.9911	2.2341	5

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.5563	3.2109	4.2734	1.0625	.3309	.1942

Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.8418	.5974	1.1756	.5782	1.9680	.0436

Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0391	-.3934	.2971	.6905	-.7553	.0365

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0651	-.4039	.4218	.8257	-1.0445	.0491

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	126.7750	127	.9982		
Within People	507.2000	512	.9906		
Between Measures	99.4125	4	24.8531	30.9607	.0000
Residual	407.7875	508	.8027		
Total	633.9750	639	.9921		
Grand Mean	3.5563				

Reliability Coefficients 5 items

Alpha = .1958 Standardized item alpha = .2584

Resp

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	RESPA	3.9609	.7977	128.0
2.	RESPB	3.9922	.6930	128.0
3.	RESPC	3.9844	.7097	128.0
4.	RESPD	3.7188	.8956	128.0
5.	RESPE	3.9844	.9473	128.0
6.	RESPF	3.8125	.9454	128.0
7.	RESPG	4.0703	.7008	128.0
8.	RESPH	3.7188	.9796	128.0
9.	RESPI	3.9609	.7571	128.0

Covariance Matrix

	RESPA	RESPB	RESPC	RESPD	RESPE
RESPA	.6363				
RESPB	.2832	.4803			
RESPC	.2435	.3148	.5037		
RESPD	.3826	.2261	.2633	.8022	
RESPE	.3695	.2440	.1887	.5546	.8974
RESPF	.2682	.2032	.2726	.3169	.2963
RESPG	.1917	.1502	.1428	.2089	.1822
RESPH	.2803	.2183	.2318	.4478	.3656
RESPI	.1953	.1887	.2514	.2803	.1884

	RESPF	RESPG	RESPH	RESPI
RESPF	.8937			
RESPG	.2259	.4911		
RESPH	.3642	.1932	.9596	
RESPI	.2761	.2626	.3433	.5733

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	35.2031	25.4702	5.0468	9

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.9115	3.7188	4.0703	.3516	1.0945	.0164
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.6931	.4803	.9596	.4794	1.9982	.0381
Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.2671	.1428	.5546	.4118	3.8829	.0073
Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3922	.2626	.6537	.3911	2.4892	.0091

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	359.4132	127	2.8300		
Within People	449.5556	1024	.4390		
Between Measures	16.8125	8	2.1016	4.9341	.0000
Residual	432.7431	1016	.4259		
Total	808.9688	1151	.7028		
Grand Mean	3.9115				

Reliability Coefficients 9 items

Alpha = .8495 Standardized item alpha = .8531

Power

****Method 2(covariance matrix) will be used for this analysis****

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	POWERA	3.3750	1.0499	128.0
2.	POWERB	3.8438	.7980	128.0
3.	POWERC	3.2969	.9830	128.0
4.	POWERD	3.7422	.8059	128.0
5.	POWERE	3.3906	.8346	128.0
6.	POWERF	2.5000	.9639	128.0

7.	POWERG	3.1016	.9377	128.0
8.	POWERH	3.9219	.7997	128.0
9.	POWERI	2.3672	.8023	128.0
10.	POWERJ	3.6250	.8324	128.0
11.	POWERK	3.8984	.8117	128.0
12.	POWERL	2.1016	.7617	128.0
13.	POWERM	3.9531	.7721	128.0

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	43.1172	15.6633	3.9577	13

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.3167	2.1016	3.9531	1.8516	1.8810	.3970

Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.7440	.5802	1.1024	.5222	1.9001	.0277

Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0384	-.3525	.4026	.7551	-1.1419	.0420

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0534	-.5140	.5958	1.1098	-1.1591	.0828

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	153.0186	127	1.2049		
Within People	1685.0769	1536	1.0971		
Between Measures	609.8221	12	50.8185	72.0270	.0000
Residual	1075.2548	1524	.7055		
Total	1838.0956	1663	1.1053		
Grand Mean	3.3167				

Reliability Coefficients 13 items

Alpha = .4144 Standardized item alpha = .4232

Perform

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	PERFORMA	3.6016	.8069	128.0
2.	PERFORMB	3.7109	.7751	128.0
3.	PERFORMC	3.8828	.8383	128.0
4.	PERFORMD	3.6719	.8239	128.0
5.	PERFORME	4.0234	.6207	128.0
6.	PERFORMF	3.7656	.8828	128.0
7.	PERFORMG	3.9453	.7457	128.0
8.	PERFORMH	3.9688	.7523	128.0
9.	PERFORMI	2.8984	.9544	128.0

Covariance Matrix

	PERFORMA	PERFORMB	PERFORMC	PERFORMD	PERFORME
PERFORMA	.6510				
PERFORMB	.3406	.6008			
PERFORMC	.1892	.3438	.7027		
PERFORMD	.1123	.2587	.4101	.6789	
PERFORME	.1590	.1722	.1917	.1652	.3853
PERFORMF	.1421	.1758	.2085	.1745	.2811
PERFORMG	.1276	.2675	.3479	.2733	.1509
PERFORMH	.0741	.0696	.1380	.2101	.1897
PERFORMI	-.1195	-.0296	-.1065	-.0808	-.0527

	PERFORMF	PERFORMG	PERFORMH	PERFORMI
PERFORMF	.7793			
PERFORMG	.2627	.5560		
PERFORMH	.2446	.1479	.5659	
PERFORMI	-.0555	.0259	-.0111	.9109
PERFORME	.3175	.3579	.3685	.3231	1.0000
PERFORMF	.1995	.2569	.2818	.2399	.5131
PERFORMG	.2122	.4629	.5565	.4447	.3260

PERFORMH	.1220	.1194	.2189	.3390	.4063
PERFORMI	-.1552	-.0400	-.1331	-.1028	-.0890

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	33.4688	16.6289	4.0779	9

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.7188	2.8984	4.0234	1.1250	1.3881	.1156

Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.6479	.3853	.9109	.5256	2.3642	.0221

Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.1500	-.1195	.4101	.5296	-3.4308	.0180

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.2515	-.1552	.5937	.7489	-3.8250	.0440

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	234.6528	127	1.8477		
Within People	624.2222	1024	.6096		
Between Measures	118.3594	8	14.7949	29.7149	.0000
Residual	505.8628	1016	.4979		
Total	858.8750	1151	.7462		
Grand Mean	3.7188				

Reliability Coefficients 9 items

Alpha = .7305 Standardized item alpha = .7515

Inform

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	INFORMA	3.6250	.8511	128.0
2.	INFORMB	3.3672	.8217	128.0
3.	INFORMC	3.3203	.8318	128.0
4.	INFORMD	3.3438	.8643	128.0
5.	INFORME	3.6563	.7257	128.0
6.	INFORMF	3.3828	.9730	128.0
7.	INFORMG	3.2031	.8993	128.0

Covariance Matrix

	INFORMA	INFORMB	INFORMC	INFORMD	INFORME
INFORMA	.7244				
INFORMB	.3671	.6751			
INFORMC	.3179	.4248	.6919		
INFORMD	.2953	.3610	.5111	.7470	
INFORME	.2165	.2768	.2448	.2766	.5266
INFORMF	.1289	.2363	.2386	.1981	.1877
INFORMG	.1870	.2555	.3990	.3233	.2436

	INFORMF	INFORMG
INFORMF	.9468	
INFORMG	.2366	.8088

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	23.8984	16.9739	4.1199	7

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.4141	3.2031	3.6563	.4531	1.1415	.0274
Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.7315	.5266	.9468	.4202	1.7980	.0166
Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.2822	.1289	.5111	.3821	3.9637	.0081

Inter-item

Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3956	.1557	.7109	.5552	4.5660	.0182

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	307.9542	127	2.4248		
Within People	363.4286	768	.4732		
Between Measures	21.0625	6	3.5104	7.8131	.0000
Residual	342.3661	762	.4493		
Total	671.3828	895	.7501		
Grand Mean	3.4141				

Reliability Coefficients 7 items

Alpha = .8147 Standardized item alpha = .8209

Value

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

		Mean	Std Dev	Cases
1.	VALUEA	3.6094	.7657	128.0
2.	VALUEB	3.3984	.7871	128.0
3.	VALUEC	3.7031	.7248	128.0
4.	VALUED	3.7188	.7729	128.0
5.	VALUEE	3.4297	.9022	128.0
6.	VALUEF	3.6797	.7729	128.0
7.	VALUEG	3.7813	.6751	128.0
8.	VALUEH	3.9922	.6815	128.0
9.	VALUEI	3.5859	.9181	128.0
10.	VALUEJ	3.8047	.8235	128.0
11.	VALUEK	3.5938	.8459	128.0

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	40.2969	31.0765	5.5746	11

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.6634	3.3984	3.9922	.5938	1.1747	.0285

Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.6270	.4557	.8430	.3872	1.8498	.0162

Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.2198	.0885	.4003	.3119	4.5257	.0061

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.3525	.1403	.5988	.4585	4.2684	.0119

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	358.7926	127	2.8251		
Within People	553.6364	1280	.4325		
Between Measures	36.5384	10	3.6538	8.9739	.0000
Residual	517.0980	1270	.4072		
Total	912.4290	1407	.6485		
Grand Mean	3.6634				

Reliability Coefficients 11 items

Alpha = .8559 Standardized item alpha = .8569

Incent

*** Method 2 (covariance matrix) will be used for this analysis ***

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

	Mean	Std Dev	Cases

1.	INCENTA	2.4844	.9638	128.0
2.	INCENTB	3.1094	1.0592	128.0
3.	INCENTC	2.8359	1.0022	128.0
4.	INCENTD	3.8672	.6444	128.0
5.	INCENTE	2.6094	.9411	128.0
6.	INCENTF	2.3438	.9174	128.0
7.	INCENTG	3.6875	.8109	128.0

Covariance Matrix

INCENTA	.9289					
INCENTB	.3246	1.1218				
INCENTC	.1903	.2307	1.0044			
INCENTD	-.1163	.0068	.0095	.4153		
INCENTE	.1592	.0037	.2819	-.0602	.8856	
INCENTF	.1708	-.1166	.4269	-.1115	.4267	.8415
INCENTG	-.1703	-.2175	-.0832	.0369	-.2175	-.1831	.6575

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 128.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	20.9375	7.8386	2.7997	7

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	2.9911	2.3438	3.8672	1.5234	1.6500	.3520

Item Variances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.8364	.4153	1.1218	.7065	2.7012	.0550

Inter-item Covariances	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0472	-.2175	.4269	.6444	-1.9627	.0417

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.0361	-.2851	.4942	.7793	-1.7338	.0557

Analysis of Variance

Source of Variation	Sum of Sq.	DF	Mean Square	F	Prob.
Between People	142.2143	127	1.1198		
Within People	871.7143	768	1.1350		

Between Measures	270.3504	6	45.0584	57.0944	.0000
Residual	601.3638	762	.7892		
Total	1013.9286	895	1.1329		
Grand Mean	2.9911				

Reliability Coefficients 7 items

Alpha = .2952 Standardized item alpha = .2076

Mailed Questionnaire App. V

Dear Sir/Madam,

Non-Profit Organizations in Hong Kong

I am a (part time) Doctoral student of the City University of HK and I am conducting a research study on board members' perceptions of decision making in nonprofit organizations (NPOs). Up till now, little research in this topic has been done locally in comparison with the USA and the UK.

Since you belong to an elite group in HK and serve as a director in several NPOs, your opinions will be very valuable to the knowledge of nonprofit governance. I therefore sincerely solicit your kind assistance in filling and returning a questionnaire to me. It will only take up a few minutes of your time.

Please be assured that the information you provide will be handled in the strictest confidence and will be presented only in the form of statistical summaries without reference to any individual or establishment.

Also the statistics will be used solely for the purposes of management science study into nonprofit governance. Moreover, every one of my anonymous respondents in my mailing list will receive a floppy disk of my complete thesis.

Only your participation can make my research meaningful. May I take this opportunity to thank you very much in advance for your kind cooperation.

Yours most faithfully,

Wai-kei Cheng
MBA (HKU 92)

Over 1000 mailed questionnaires have been sent to secure at least 300 valid returns. It is impossible to trace non-respondents because of confidentiality. Money saved from the 2nd and 3rd rounds of questionnaire, which is estimated to be **HK$10000, will be donated to charity** and a copy of the cheque will be sent together with the floppy of my thesis in appreciation of the respondents' help.

PART ONE PERSONAL PROFILE 第一部份。個人簡介

請在適當位置加 ∨ Please tick as appropriate

2. 年齡組別 Age group

- ☐ 二十九歲以下 29 years and below
- ☐ 三十至四十九 30 – 49 years
- ☐ 五十至五十九 50 - 59 years
- ☐ 六十及以上 60 and above

2. 性別 Sex ☐ 女 female ☐ 男 male

3. 原國籍 Ethnicity ☐ 亞洲 Asian ☐ 非亞洲 Non Asian

4. 理事類別 Membership
- ☐ 非執行理事 Non-executive 兼職
- ☐ 執行理事 Executive 全職

5. 任期 Tenure
- ☐ 五年或以下 5 years and below
- ☐ 六至九年 6 – 9 years
- ☐ 十至十九年 10 – 19 years
- ☐ 二十年以上 20 years and above

6. 機構類別 HSIC (HongKong Standard Industrial Classifications)
- ☐ 公營機構 public administration
- ☐ 教育機構 education
- ☐ 醫療機構 health
- ☐ 福利機構 welfare
- ☐ 宗教組織 religions
- ☐ 工商會 trade association
- ☐ 文化機構 culture
- ☐ 文康體育組織 sports/recreation
- ☐ 其他(請列出) Others (please specify).....

7. 機構僱用人數 Number of employees In Nonprofit Organization
- ☐ 十九或以下 19 and below
- ☐ 二十至九十九 20 - 99
- ☐ 一百至四百九十九 100 - 499
- ☐ 五百以上 500 and above

PART TWO QUESTIONAIRRE 第二部份。問卷

敬請在方格內，填上合適的個人意見

十分同意 同意 中立 不同意 十分不同意

5……4……..…3……..……2……..…..……1.

敬請填滿所有方格

I. **行爲規範** (機構 = [非牟利機構])

根據你的觀察

a. [非牟利機構]的倫理標準比[牟利機構]較高

b. [助人利他]倫理標準爲機構服務重要的動機

c. 機構有明確的利益衝突指引

d. 機構重視[非執行]和[執行理事們]的融洽伙伴關係

e. [非執行理事]對機構的批評，備受歡迎。[執行理事]認作支持及工作熱誠表現

f. 理事以機構的目標爲先，個人的目標爲後

g. 機構鼓勵[代管理人精神]多於[創業者精神]

II. **扮演角色** (機構 = [非牟利機構])

根據你的觀察

a. [理事會]全體是最後政策制定人

b. [非執行理事]認爲他們掌握話事權，視[執行理事]爲他們的助手

c. [非執行理事]密切監察[執行理事]的表現

d. 所有理事們均高度稱職及熟識機構的運作

e. 理事們的出席率可接受

III. **公職責任**

公職上，理事們要負上下列的責任

a. 爭取資源

b. 調配資源

c. 控制資源

d. 批准人事政策

e. 委任高級職員

f. 仲裁及平息爭議

g. 制定及監察戰略性計劃

h. 決定一切工程，購物合約

i. 根據需求，制定提供服務種類及質素

IV. **權力來源**

根據你的觀察，最有影響力的理事的權力來自她或他們本身

a. 在社會上的地位

b. 在管理階層的的崇高地位

敬請在方格內，填上合適的個人意見

十分同意　同意　中立　不同意　十分不同意

5……4……3……2……1.

敬請填滿所有方格

IV. **權力來源**

☐ c. 對資源有控制權

☐ d. 熱切盡忠職守

☐ e. 消息靈通

☐ f. 與要職人員關係良好

☐ g. 教育水平高

☐ h. 廣泛工作經驗

☐ i. 職業上的聲望

☐ j. 對社會問題有理解

☐ k. 有良好分析力和協調力

☐ l. 有良好的人際關係及網絡

☐ m.人格完整，高尚和正直

V. **實質上工作表現**

在現實上，決策過程中，[理事會]特別重視提案是否

☐ a. 技術上卓越

☐ b. 提高生產力

☐ c. 改善財務，如資金周轉，現金狀況

☐ d . 降低成本，如材料，運作經費等

☐ e. 提高服務或產品的質素

☐ f. 提高士氣，及團隊精神

☐ g. 成本效益，及物有所值

☐ h. 最佳社會利益

☐ i. [執行理事]的意願

VI **資訊渠道**

根據你的觀察

☐ a. [非執行理事]通常可獲得他們所需要的資料

☐ b. [非執行理事]可很快地獲得額外所需資料

☐ c. 所提供資料質素極高，清楚，簡明

☐ d. 所提供資料極有用，全面及不誤導

☐ e. [非執行理事]對[執行理事]所提供資料有信心

☐ f. [非執行理事]並不容易獲得他們所需要的資料

☐ g. [非執行理事]通常有充足時間閱讀所提供資料

以上中文本根據[牛津高階英漢雙解詞典]第四版由[香港牛津大學出版社]一九九四年出版

敬請在方格內，填上合適的個人意見

十分同意　　同意　　中立　　不同意　　十分不同意

5……4……3……2……1.

敬請填滿所有方格

VII. [理事們]的工作表現評估 (機構 = [非牟利機構])

根據你的觀察，

☐ a. [理事們]對機構的工作表現滿意

☐ b. 社會對機構的效力和效率評估很高

☐ c. 機構的服務或產品滿足香港社會的需要

☐ d. [理事們]清楚知道機構的強點和弱點

☐ e. [理事們]有明確方法去評估及調控機構服務和產品的質素和數目

☐ f. 機構關注員工的福利

☐ g. 機構關注顧客的福利

☐ h. [理事們]致力提高質素和不斷改善

☐ i. [理事們]致力員工培訓和發展

☐ j. [理事們]從錯誤中學習

☐ k. [理事們]明確交出有效益的工作

VIII. 服務機構的動機 (機構 = [非牟利機構])

根據你的觀察，[非執行]和[執行理事]服務機構的動機

☐ a. 個人或其僱主對機構的服務和產品有興趣

☐ b. 由其僱主委任

☐ c. 對個人前途有幫助

☐ d. 希望對[非牟利機構]的工作有貢獻

☐ e. 希望與社會上同階級人士會見

☐ f. 增進及發揮個人見識

☐ g. 本身爲專業人士

多謝閣下的合作。論文磁碟及慈善捐款收據副本各一份，容後呈上。

以上中文本根據[牛津高階英漢雙解詞典]第四版由[香港牛津大學出版社] 一九九四年出版

Please indicate the degree to which	Strongly Agree = 5
you agree/disagree with the following	Agree = 4
statements by writing the nearest	Neutral = 3
appropriate number in all spaces.	Disagree = 2
	Strongly Disagree = 1

I. **Behavioral Norms** (NEDs = non -executive members; NPO = non-profit organization)

According to your perception

a. ethical standards for businesses are of a lower level than NPOs ☐
b. morality/altruism is one important source of motive for contributing to an NPO ☐
c. there are clear guidelines on self-dealing and conflict of interest in your NPO ☐
d. collaborative partnership among NEDs and EDs is stressed ☐
e. NEDs' criticism of your NPO's activities is welcomed by EDs as a sign of support and enthusiasm ☐
f. members subordinate their own personal interests to those of the NPO ☐
g. stewardship rather than entrepreneurship is stressed in your NPO ☐

II. Roles (NEDs = non -executive members)

According to your perception

a. the board as a whole is the final policy maker ☐
b. NEDs consider themselves in charge and hence see EDs as their assistants ☐
c. NEDs closely monitor the EDs' performance ☐
d. board members are highly competent and know what they are doing ☐
e. board members' attendance records are acceptable ☐

III. Official Responsibility

The board or its subcommittee is officially responsible for

a. resources acquisition ☐
b. resources allocation ☐
c. resources control ☐
d. personnel policies ☐
e. appointment of senior staff ☐
f. arbitration and dispute resolution ☐
g. making and monitoring strategic plans ☐
h. awarding contracts ☐
i. determining areas and levels of service provision based on need ☐

IV. Power Base

In your perception, the most influential members of this board derive their power from

a. social status ☐

Please indicate the degree to which	Strongly Agree = 5
you agree/disagree with the following	Agree = 4
statements by writing the nearest	Neutral = 3
appropriate number in all spaces.	Disagree = 2
	Strongly Disagree = 1

IV. Power Base (continued)

b. hierarchical authority ☐
c. access to financial resources ☐
d. intensity of commitment ☐
e. access to information ☐
f. relationship with key persons ☐
g. formal higher education ☐
h. wide experience ☐
i. the prestige of their occupations ☐
j. knowledge of community problems ☐
k. skills of analysis and persuasion ☐
l. friendship and networks ☐
m. personal integrity ☐

V. Actual Performance

In making decisions, the board pays especially close attention to

a. the technical excellence of proposals ☐
b. productivity issues (value for money) ☐
c. financial management, e.g. cashflow, solvency ☐
d. reducing costs, e.g. materials, overhead ☐
e. quality of services or products ☐
f. staff morale and teamwork ☐
g. cost-effective solutions ☐
h. the best interests of the community ☐
i. quick decisions ☐
j. the wishes of EDs ☐

VI. Access to Information

According to your perception

a. NEDs usually get the information they require from the EDs ☐
b. NEDs can quickly get any further relevant information they ask for ☐
c. Available information is both very clear and concise ☐
d. Available information is not misleading, giving the whole picture ☐

Please indicate the degree to which	Strongly Agree = 5
you agree/disagree with the following	Agree = 4
statements by writing the nearest	Neutral = 3
appropriate number in all spaces.	Disagree = 2
	Strongly Disagree = 1

VI. Access to Information (continued)

e. NEDs have full confidence in the information given them by the EDs ☐
f. There is considerable difficulty in getting necessary specific information ☐
g. Board members are given sufficient time to read all the information ☐

VII. Valuation of Performance

a. members are satisfied with the NPO's performance ☐
b. the NPO is highly efficient and effective ☐
c. the product/service of the NPO meets society's needs ☐
d. members know the strengths and weaknesses of the NPO ☐
e. the board has well-established methods to regulate/govern the quality/quantity of NPO's product/service ☐
f. the board cares for its employees ☐
g. the board cares for its customers and clients ☐
h. the board is committed to quality and continuous improvement ☐
i. the board is committed to staff training and development ☐
j. the board learns from its mistakes ☐
k. the board is clearly effective in its functions ☐

VIII. Incentive to Participate

According to your perception, a typical member participates because ☐

a. her/his company has an interest in the product/service of this NPO ☐
b. s/he is appointed by her/his employer/institution ☐
c. it may help her/him advance in the present job ☐
d. s/he wants to contribute to the work of this NPO ☐
e. s/he likes to meet people of her/his same social standing ☐
f. s/he may acquire new knowledge or develop her/his skills ☐
g. s/he is a professional/expert ☐

(Thank you very much for your patience in completing the questionnaire!

You will receive a copy of the thesis and receipt in due course)

---end---

3.1999

App. VI

Terminology in Management Ethics

Altruism may be defined as a type of pro-social behaviour in which a person will voluntarily help another at some cost to her/himself. The primary motivation for altruistic behaviour may be a desire to improve the welfare of another person rather than the anticipation of some reward (Cardwell, 1999:8). Batson (1991) defines 'altruism' as a motivational state with the ultimate goal of increasing other people's welfare, and 'egoism' as a motivational state with the ultimate goal of increasing one's own welfare. Blum* contends that altruism and egoism need not be mutually exclusive; rather they form a behavioral continuum; meaning that people are not completely indifferent to and completely unconcerned about the interests of others. In the same vein, Galston* (*both in Batson, 1991) distinguishes the three types of altruism as: personal, communal and cosmopolitan. Personal is for the individual, communal for the community and cosmopolitan for the present and future generations in the world.

Behaviourism refers to an approach to psychology that accounts for behaviour in terms of observable events and without reference to inborn

tendencies or mental concepts such as inner experience, attitude, mind or emotion (Cardwell, 1999:29). Under behaviorism, motivation is inferred from assumed needs and reinforcement schedules. Behaviourists' emphasis on single influences on behaviour is a simplification of circumstances whereas behaviour is influenced by many factors (*ibid.*). When this is acknowledged, it becomes almost impossible to judge the action of any single one. This over-simplified view of the world has led to the development of 'pop behaviourism', the view that rewards and punishments can change almost anything. This was not what behaviourists such as Skinner intended. Skinner was at pains to emphasize the importance of intrinsic rewards such as a person's pride and initiative in their choice of activities (*ibid.).*

Behaviourists also believe that learning is through conditioning, reinforcement, rewards and punishment, and modeling (*ibid.*) (see also 'humanist school' below).

The Behaviorist school thus (e.g. Skinner) considers a broader spectrum of human motives, such as environmental forces and learned responses, that people successively adopt as they make progress socially, financially and intellectually in life (Handy, 1976:33-4). Handy groups all motivation

theories under the three categories of: incentive theories, satisfaction theories and intrinsic theories (*ibid.*:24-5). It should be pointed out here that most early incentive motivation studies are based on non-human animals (Gross, 1996:12-3).

Communitarianism refers to the doctrine that charts a middle course between individualist and authoritarian organizations of society. To this end, communitarians advocate building inclusive communities that will promote the principles of: cooperative enquiry (the basis for judging the validity of arguments); mutual responsibility (what members of the community owe to each other); and citizen participation (reforming power structures to enable citizens to participate equally). These principles are applied to ideological debate, the reform of educational institutions, employment relations, business and the voluntary sector (Tam, 1997).

Conscience may be defined as a set of moral principles that guide us in our decisions regarding right and wrong (Cardwell, 1999:54). Some ethicists have argued that a 'well-informed, sensitive and finely tuned' conscience may be objective. Others argue that, in reality, conscience is invariably influenced by one's cultural and religious backgrounds, and is therefore as biased as the tenets of a particular culture or religion (Smith,

1986:15-15; Tome, 1986). For example, several research studies have found that people are often confused by what we want versus what we ought not to; and that without critical scrutiny, we cannot judge matters of right or wrong (Smith, 1986:15-17). It has been found that people under study only disapprove others' unethical activities, but not their own (Frew, Asch and Niebuhr in Shaw et al., 1995; Cheng, 1998). Furthermore, an otherwise morally responsible person may be prepared to surrender her/his conscience at work for self-interests (job, status, money, friendship and supervisor's approval), or as an agent for the employers' self-interest. It has sometimes been said at work, an employee is rarely expected or encouraged to show the same strong moral sense of the private person. Rather, s/he is expected to follow norms regardless of conscience because 'that is business'.

Consequentialism or **teleological theories** decree that utility is the yardstick for measuring outcome (Pettit & Goodin in Singer, 1991). Utilitarianism or more specifically the hedonist version of altruistic consequentialism, holds that an action is right if, in a given situation, it leads to a greater satisfaction of desires, taking into account all those affected, than does any other available alternative. That is to say,

utilitarianism seeks the best consequences for others (altruist) and not merely for oneself (egoist). This is (very) roughly equivalent to the stakeholder approach without the deontological element (Brody, 1983). (see also non-consequentialism)

Customs and **Norms** refer to the general rules of conduct prevailing or expected in a particular society or culture. People are expected to exert their efforts to reach consensus on objectives and value. Mores or customary morality is the established canons of behavior that exist at one time and another or in one place or another. In organizations, behavioral norms have strong influences on employees.

Deontology contends that some moral rules must not be broken even if better consequences could be achieved by breaking them (O'Neil in Singer, 1999). Kant (1724-1804) argues that all human beings possess certain moral rights and duties, regardless of any benefits such rights or duties may provide for other people (Shaw, 1999:44). He claims that all rational people ought to obey a categorical imperative derived from a universal law of reason. Simply stated, his Categorical Imperative or Moral Law is to 'act only on the maxim through which you can at the same time will that it be a universal law' (Shaw, 1999:32-33; Velasquez,

1998:93).

A very important concept in Kantian ethics is universal acceptability, i.e. that a person is an end to her/himself as well as others. S/he is not permitted to use either herself/himself or others merely as means; instead, it is her/his duty to make humankind in general her/his end (Shaw, 1999:58-59). Kant's concepts incorporate two criteria for determining moral right and wrong; they are universalizability and reversibility. Universalizability means that 'the person's reasons for acting must be reasons that everyone can act on in the same manner and situation at least in principle'. Reversibility means that 'the person's reasons for acting must be reasons that s/he would be willing to have all other people to use as a basis of how they will treat her/him' (Velasquez, 1998:95). However, Kant's theory may not be able to deal with conflicting rights and his criteria of universalizability and reversibility may prove insufficient for complex situations (*ibid.*:99-100).

Kantian theory is antithetic to utilitarianism in the sense that it emphasizes unconditional, universal and self-disciplined benevolence, whereas utilitarianism stresses conditional, pragmatic and others-disciplined utility.

Egoism, also known as the Greatest Happiness Principle, may be defined as the tendency for people to behave largely out of self-interest (Cardwell, 1999:83). Egoists hold that actions are right if they tend to produce happiness; wrong if unhappiness or pain. **Psychological egoists** (Batson, 1991;OU, 1979) practically deny any possibility of altruism, and view all human actions as motivated by overt, covert or sub-conscious self-interest, even in helping others. They also contend that the pursuit of one's own good is the rational, and even the ethical way to live. Nietzsche and Rand go further to argue that altruism is actually a moral evil. It can turn out hurting the helper physically, and the helped mentally (*ibid.*).

While egoists acknowledge that it is only natural for people to rank themselves as most important of all stakeholders (Posner and Schmidt in Weiss, 1994); many may not feel the need for advocating egoism because of the assumption that all individuals are egoistic already. On the other hand, B. Butler, J. Rousseau, D. Hume and A. Smith have contended that under certain circumstances, egoistic motivation can co-exist with 'some self-restraint, moral sentiments, impartial sympathy in their economic and commercial lives (Batson, 1991)'. Smith also argues that egoistic people sometimes do act from a sense of justice, friendship, loyalty, compassion,

gratitude, generosity, sympathy and affection. In a sense, Smith may be construed as a mature, thoughtful and moderate proponent of **philosophical egoism**, which has later become very well established among the USA academics who contend that one should always follow one's self-interest regardless of whether one naturally follows one's self-interest (Rand in Gladstein, 1984).

Empiricism is the belief that all knowledge is, or should be, derived from direct experience. As a method, it emphasizes the experimental collection of data rather than the deduction of truth from theoretical principles.

Essentialism believes that there are some essential elements (instincts, personality, disposition, genes, attitudes and intelligence) within us that both govern and explain what we do and what we feel.

Ethics or **moral philosophy** is a sub-branch of normative philosophy. C. Pierce (in Gould, 1992) defines philosophy as 'a system of beliefs about philosophic issues such as love, good life, duty to country and the role of government'. It is concerned with the full perception or intellectual development of what is right for the creation and preservation of our society, including both means and ends; for example, the kind of society that will emphasize respect for individuals and social obligations, a noble

spirit, order, moderation, compassion, and self-control. Philosophy does not aim at benefiting people economically. It is generally concerned with our understanding of the meaning, purpose and responsibility of our lives. Philosophy also helps us improve human relationships, gives us peace, and minimizes our fear, suspicion and frustration (程逸, HKEJ, 30.12.1999:30).

Ethics deals with individual character and the moral rules that govern and limit our conduct. It investigates questions of moral right and wrong, duty and obligation, and moral responsibility (Shaw, 1999:32). In Aristotle's terms, ethics may be defined as 'the quest for and the understanding of, the good life, living well, a life worth living, a matter of attempting to gain and maintain a balanced perspective on life (Solomon & Hanson in Wines *et al.*, 1994)'. Ethics is a higher level, abstract activity involving behavior choice rather than the compliance with rules. It is concerned with cognitive, analytical and reflective application of ethical principles to complex, conflicting or unclear situations.

Hedonism is a belief that all behaviour is, or should be, motivated toward the pursuit of pleasure and the avoidance of pain (Cardwell, 1999:113).

Humanist school (e.g. Rogers, Maslow, McGregor, Kohlberg) is less

mechanistic and impersonal than other psychological schools. It believes that human beings are born with the desire to grow, create and to love, and had the power to direct their own lives. The environment that a person is exposed to and interacts with can either frustrate or assist this natural destiny. If it is oppressive, it will frustrate; if it is favorable, it will assist. Humanist school also believe that the most fundament aspect of being human is subjective experience

It makes essentialist assumptions about the true nature of human beings (Cardwell, 1999:117). It emphasizes the uniqueness, rationality, self-concept, self-esteem and self-determination of the individuals. Freewill and self-actualization make human beings distinct from animals (Gross, 1996:12-3). This school recognizes that the motives behind human behaviors are more complex than just self-interest. It advocates unconditional positive regard, companionship, friendship and mutual trust as a means of personal development.

Humanists also believe that the route to learning moral behaviour is through warm family relationships which are conducive to emotional development and which lead a person to identify with appropriate pro-social behaviour. Rosenhan (1970) found that the most altruistic

people had warm relations with their parents and their parents thought and behaved altruistically (Cardwell, 1999:1).

Intuitionists (Dancy in Singer, 1991) believe 'that morality can be objectively true or false and that we can come to know what moral principles are right in a special way, by a kind of intuition or direct awareness of their moral properties'.

Morality, in contrast to ethics, is the body of accepted principles within a culture, a religion or a commonly subscribed precept (Pierce in Gould, 1992). Morality has at least three levels of standards: required morality enforced by the group, desired morality encouraged by praise and ideal or revered morality.

Non-consequentialism is a belief that some actions are inherently good or bad and that any decision must be a 'matter of principle'. In contrast, the consequentialists believe that actions are either good or bad depending on their consequences (Wines *et al.*, 1994:9-10; Tome, 1986).

Naturalists (Pierce in Gould, 1992) contend that 'morality can be true or false and can be known, and goodness and rightness can be identified with, or reduced to some other properties, e.g. pleasure, God's will.' In defending their view, naturalists take account of the stricture that it is a

fallacy (the naturalist fallacy) to derive values from facts.

Objectivists believe in some consistent and universal principles such as inalienable human rights, to them, these principles are also dependent on circumstances. In other words, these principles are both ideal and abstract, limited and unlimited, absolute and relative. Objectivists assume that while everyone has the radical potential to reason, s/he must submit to 'group supremacy'. Some of these objectivists even go to the extreme and argue that as human rights originated from an elite group of legislators as an afterthought in the legal system, who should have such rights thus depends on situations and on facts about the unique situations and objective reasoning. From that point of view, the objectivity of common values means that values are shared by impartial and rational people, the legislators and not the ordinary people (Tome, 1983).

Phenomenology emphasizes that one's subjective and contemporary experience of an event is an important and influential factor on one's behaviour. We may find it difficult to understand other people because we are unable to perceive the world in the way that they do. Only by seeing the world in the same way they do can we really understand why they act in the way they do (Cardwell, 1999:174).

Positivism (Bryman, 1988, Gummesson, 1991; Seidman, 1991; Ragin, 1994) is the belief that we should not go beyond the boundaries of what can be observed. To a positivist, science is the single-most important route to knowledge, and only questions that can be approached by the application of the scientific method should concern us. A variant of positivism, logical positivism (Cardwell, 1999), relegates all approaches to knowledge that could not be verified by scientific means to the realms of meaningless emotion and belief.

Principle of Justice. Justice and economic distribution are important aspects in ethics. The nature of justice has been expounded by the utilitarian school (*Mill, 1948 & 1957), the libertarian school (*Nozick, 1974) and Rawls's theory of justice (*Rawls, 1971, *all in Shaw *et al.*, 1995). Distribution of social benefits and burdens involves the conflicting goals of equality, need, effort, merit, social contribution, maximum utility, liberty, rights and social-contract traditions. Theoretically, Rawls's two principles of justice are based on egalitarian theory. His approaches using 'the original position' and 'the veil of ignorance' help reach ethical decisions through a mixture of game strategies, self-interest and benevolence (Mitnick, 1993:13-5).

The libertarian justice theory is basically concerned with the protection of 'rights' and the freedom from coercion. Any economic benefits that we 'freely' choose are just. Under its entitlement principle, people have a right without interference, to economic benefits that we produce for ourselves. Also under its principle of rectification of injustice, the holdings of a person are just if s/he is entitled to acquire/transfer them.

Principle of Moral Rights raises many questions: Who can have a moral right? What are the contents of a moral right? How do we justify one's moral right? Are moral rights inalienable? To many people, the very idea of moral rights, unless stated as laws, is still evasive. For example, in developed countries in the West, civil liberties and political rights have already become legal rights and are enforceable by courts (Velasquez, 1998:88-9). These countries have secured for their peoples freedom and equality before the law and more equal opportunities. In contrast, there are other populists who are ready to trade their interests in human rights for the support of 'law and order'. They perceive human rights as the cause of excessive demands for 'free lunch' and for toleration of nonconformist behavior.

Relativism is a belief in the subjectivism of values, or its dependence on

the individuals' unique feelings, biases or perceptions. As individuals are different, there is no consensus on value systems. For example, people may seek after either the fulfilment of an altruistic need or their own happiness. Under the same circumstances, people subscribing to different value systems may act differently. Yet, because of rapid globalization, authorities of Westernized traditions now accept more readily one ethics and one code, with only slight modifications to extenuating and aggravating factors (Vinten, 2000).

Social Constructionists (Gross, 1992) argues that we cannot understand human behaviour based on the idea of a rational, self-sufficient individual. Rather, they believe that people are dominated by cultural discourses; viz. patterns of beliefs, ideologies, or 'versions of events', history, to create and justify their wrongdoings.

Social Darwinism is very much akin to egoism, Social Darwinists, e.g. Spencer, apply the Darwinian genetic evolution to ethics. They advocate that in business as well as in other areas, the strong are destined to prevail over the weak, and that the strong do not necessarily have any social responsibility except as the animal instinct for a better chance of survival (Singer, 1991; Sullivan, 1994). Several management theorists, typified by

M. Friedman (1970) and E. Sternberg (1997), have enlisted this concept in their argument for the practice of relentless profit maximization (Vinten, 2000). It must be noted that extreme social Darwinists have little or no compassion for losers in the hostile competition for resources, a phenomenon aptly called 'the tyranny of the fittest'.

Subjectivists hold the view that morality is subjective, therefore any moral opinion is as good as any other (Rachel in Velasquez, 1998). Also they hold that moral inquiry cannot yield objective truths because people require impartiality and reasonableness in reasoned argument.

Utilitarianism is the most widely discussed theory in consequentialism. Bentham (1748-1832) and Mill (1806-1873) are considered to be the pioneers of traditional utilitarianism (Shaw, 1995:49). While they admit universal egoism, they also contend that the very motivational force behind our action is 'the principle of utility'. To Bentham, anything that brings happiness is good; anything that causes pain or displeasure is bad. His measures of happiness are intensity, length of duration, certainty, speediness, fruitfulness and purity. These measures appear to Mill to be objective and situational, and not related to one's motives or conscience. Proponents of utilitarianism later interpret Bentham's 'Principle of utility'

as locus-aggregative, 'the greatest good for the greatest number' (*ibid.*:51). Mill later modified his quantitative measurements to include also quality. To both Bentham and Mill, ethics is only a means to an end of happiness. It is thus conditional and non-universal in nature (Velasquez, 1998:72-77).

Utilitarians may practise 'ends justify means' and 'the tyranny of the majority' consciously or unconsciously (Shaw, 1995:52). Businesspeople serving as NEDs often mistake instrumental goods as intrinsic goods, and seek economic performance rather than enduring purposes and social responsibility. Contrary to common belief, utilitarianism does not assert that the agent will benefit most from the right action, nor that the benefits of a right action outweighs its cost. Rather, it contends that the right action is defined as the one that creates the greatest net benefits compared with all other possible alternatives, while taking into consideration both immediate and all foreseeable future costs and benefits, direct and indirect (Velasquez, 1998: 73).

Value is defined in this thesis as 'the conception derived from ethics that becomes an explicit or implicit characteristic of an individual or a group, and refers to the set of desirable objects that influence the choice among

alternatives of means and ends' (Kluckhohn, & Rescher in Maclagan, 1998).

Virtue Ethics is similar to Kant's universal principle of ethics. Pioneers in virtue ethics include Socrates, Plato, Aristotle, Confucius and Mencius. Virtue or character ethics proceeds from the premise that 'every time we act, we simultaneously define ourselves as the kind of persons who act in such a way and change ourselves because we tend to become what we do' (Pence in Singer, 1991). Virtue ethics is more concerned about the agent's character traits and sense of justice rather than any reason for his decision or act. It is an argument from being (ontological) not from purpose (teleology). The focus shifts from 'moral actions' or 'moral decisions' to 'moral agents', the personal qualities that they possess or can acquired which will enable them to make the correct choice and act on it (*ibid.*). The question being asked is 'How ought I to live?', 'What kind of person should I be?', or 'What is honorable, fair, noble, generous etc.?' rather than 'What ought I to do?' (Peirce in Singer, 1991; Tome, 1986). The answers to these questions generate a list of desirable virtues that bind our relationships with others.

Virtues are 'personal qualities or attributes, aspects of the individual who

is not just able to act justly or generously, but who is actually a just or generous person' (Velasquez, 1998:130-9). Aristotle (384-322BC) contended that a good person should be more concerned about 'What is worthwhile in life' than about 'commitment to rules and regulations'. A person must achieve excellence not just in her/his particular profession but as a human being. Even among bureaucratic rules, s/he must try to come up with new ideas in solving moral problems (Shaw *et al.*, 1995). More specifically, Plato promulgated the four cardinal virtues of wisdom, justice, moderation and courage; which were later taken up by the Judaeo-Christian Book of Wisdom. These virtues thus acquire immense religious as well as philosophical authority in the history of western ethical thought.

Universal prescriptivism (Singer, 1991) tries to rectify the problem of arbitrariness that characterizes other objectivist theories such as those of naturalism and intuitionism (*ibid.*). In contrast to standard subjectivist theories, prescriptive, rule based ethical reasoning is used to complement Kantian ethics and utilitarianism.

App. VII

Regulatory Framework for NPOs in Hong Kong

Introduction

The emergence of NPOs in Hong Kong was due to the absence of the public and the private sectors in areas having problems of social inequity (Cheng, 1998; Smith, 1988). In the early days of Hong Kong, religious bodies such as Buddhist, Christian and Catholic (Ranci, in Voluntas, v.5 n.3) and clan-based networks dominated the sector. The clan-type NPOs aimed mainly at fellowship and mutual companionship. They provided refugees from the Mainland a cushion from the hardship of uprooting from their homeland. Much later, other types of NPOs started to emerge, e.g. the Hong Kong Jockey Club and the Community Chest. The Jockey Club now pays for much of the Chest's donations, which in turn pays its 143 member charitable organizations. Almost all these 143 organizations are subvented bodies that rely on the government for up to 96% of their funding.

NPOs worldwide are often pioneers and experimenters of the many social, ideological and moral innovations in education, welfare, healthcare, religion and other areas before the government takes over. In other words,

this sector provides the social risk capital of human society in areas where activities are not yet popular enough for the government or profitable enough for business (Smith, 1988).

In USA, managerialism is a common currency since 1960s. It means decisive executive action unconstrained by inconvenient social responsibility in the private sector. When managerialism is applied in NPOs, taken to be a model community of altruists; the executives, instead of regulated by very strict rules in the private sector, are more restrained by interactions and common decencies. In UK, there are, with some local variations, also similar problems of executive unaccountability in NPOs. Reformers have focused on systemic questions such as the appointment procedures, stakeholder representation and devolution of power for the control of executives.

In the ten years from 1989 to 1999 in Hong Kong, the number of co-operatives has grown eight fold to more than 211, with over 30000 members and volunteers.

There are now some 3000 organizations in Hong Kong registered under the nonprofit sector according to records kept at the Census and Statistics Department. They include organizations in education, health, charity,

religion, trade associations, welfare associations, cultures, arts, sports and others (such as: grant-making foundations, voluntary organizations, co-operatives, grass-roots social organizations, and professional bodies). The governance of formal NPOs in Hong Kong resembles the practice in UK. Except in less formal NPOs with only a small, paid staff or in cooperatives with voluntary, open and voting memberships; all nonprofit governing boards (GBs) are legally responsible for their organizations and for overseeing the chief executive officers (CEOs). Most GBs, especially those of complex NPOs, also take on other responsibilities and have committees to help discharge such duties (EMB, 1992; Duca, 1996:43-47).

One such committee is advisory in nature (Duca, 1996:43-6). A member from the GB will serve as an ex-officio member of the Advisory Board or Committee (AB). S/he will report to the CEO or GB on the AB's activities, act as a resource person, and help keep its operations within the scope of the NPO's mission. The AB is not to be confused with GB because the former does not have any real authority and responsibilities. At the GB's or the CEO's request, the AB may conduct studies, make recommendations or give advice. The CEO is neither accountable to the

AB nor obligated to accept its recommendations. Other duties of the AB members include fund-raising, social and marketing programmes, support to the NPO's programmes and acting as ambassadors of good will. However, when members' respective roles in GB and AB are not clearly defined and explained to them, they may experience unnecessary conflict (see p.31-32; Yu, 1997; Wu, 1998; and Ho, 1998).

Examples of ABs may be found in Hong Kong within the Vocational Training Council (see paragraph on 'non-departmental public bodies, NDPBs' below). The Council has a complex of some 20 ABs. Members of the Council (i.e. its GB) and ABs are both appointed by the government, and comprise citizens serving voluntarily in their spare time. They may be businessmen, academics, labour representatives, professionals and heads of interested government departments (EMB, 1992).

Legal Framework for NPOs

Like other private companies, NPOs in Hong Kong must comply with the provisions of the Companies Ordinance, and the Business Registration Ordinance, and with the provisions of the organization's memorandum and articles of association. The memorandum of association contains clauses on the name of the organization, the domicile clause (registered

office in HK), object clauses (proposed business or activities and power of the organization), a liability clause (upon winding up), a capital (formation) clause and a subscription clause if applicable (Cheng *et al.*, 1990). The articles of association prescribe the internal regulations for the company: rules governing the holding of the meetings (e.g. frequency, advance notice, quorum, method of voting), the appointment of directors (e.g. number, qualifications, resignation/removal procedure), their rights (e.g. remuneration) and obligations (e.g. disclosure of interests) etc. and the relationship, rights and obligations of the members amongst themselves (*ibid.*; Lam *et al.*, in Voluntas, v. 11, n.4).

The activities of NPOs are restricted by fewer regulations imposed by the Ordinance as compared with a public company. For instance, NPOs are not required to submit their annual audited financial statements to the Companies Registry. They are not required to comply with the Securities Ordinance, the Securities (Disclosure of Interests) Ordinance, the Protection of Investors Ordinance, the Rules Governing the Listing of Securities, the HK Code on Share Repurchases, the Securities (Insider Dealing) Ordinance and the HK Code on Takeovers and Mergers (*ibid.*). This remission is justifiable because many, if not all, of these particular

sets of regulations are relevant to NPOs anyway. For many NPOs, their Ordinances even allow them to prescribe their own constitutions, e.g. Community Chest, Red Cross (see Subvented Organizations and Non-departmental Public Bodies below). Nevertheless, organizations receiving subvention are, like those in UK or elsewhere, not free from government interference (Kramer in Voluntas, v.2.n1; see below).

Public Sector Reform

In the early 1980s, confidence in the governments' ability to effectively manage their agencies as service providers had been seriously eroded with tales of fraud, waste and abuse in several countries. The USA and UK governments first started their public sector reforms that were followed by other OECD members. In these two countries, there was a widespread perception that the private sector could probably provide public services more efficiently and effectively than government, and that privatization might allow citizens to choose their providers. There was also demand for increased public scrutiny of public expenditures that led government agencies to impose stricter auditing requirements in their service contracts (Duca, 1996:136; Lester *et al.* in Voluntas, v3.n.3).

Similarly in Hong Kong in 1989, the Finance Branch called for a public

sector reform (PSR, February, 1989). The reform aimed to improve the quality of management in the public sector. Like other countries before the reform (Grindheim *et al.* in Voluntas, v.1.n.1), the local government focused on cost control rather than cost effectiveness and value for money. To change its strategy, the Finance Branch believed that a framework was needed to provide:

1. clear responsibilities for policy making, resource provision and service delivery;
2. well-defined objectives for the programme;
3. well-defined activities for delivering services in the programme;
4. a clear matching of resources and activities; and
5. evaluation of results (actual against planned outturn) against cost.

The new framework ensured that the principles of resource awareness and accountability for the results achieved would be applied by evaluating the actual output in terms of both quality and quantity against the promised performance indicators on which allocation of funds was based (*ibid.*). Despite the public sector reform, free-rein policy still applied to those private NPOs that had informal, ad-hoc GBs and processes (Chu, 1990). Even up to 1994, the more formal NPOs (e.g. the Housing Society set up

in 1948) were still governed solely by their own constitutions, which the GBs could amend at any time (Ng, 1994). When three of its own nineteen directors had been awarded contracts of key projects by the Housing Society; the Independent Commission Against Corruption (ICAC) had recommended the Housing Society to open its decision-making process to public monitoring, and the government was also urged to regulate the Chinese-style NPOs (*ibid.*). As a result, many of the public bodies are now under the scrutiny of ICAC. On the other hand, up to 1998, many government subvented NPOs still have not democratized their appointment system, evaluated members' performance systematically or opened their meetings to the public (Chu 1998; Wu 1998).

Government's role in NPOs

In Hong Kong as in other countries, e.g. Norway, welfare providers may be identified as the community or family informal organizations, profit-making organizations (PMOs), NPOs and public sector or statutory bodies (NGOs or NDPBs) (Grindheim *et al.*, Voluntas, v.1.n.1). The International Classification of Nonprofit Organizations (ICNPO) lists 12 major groups and 24 sub-groups of NPOs (Lester *et al.* in Voluntas, v3.n.3). In general, the non-profit sector is used to describe ideological

and service producers that are non-profit distributing, self-governing and voluntary. The public sector often refers to the government departments or welfare agencies (Lester *et al.* in Voluntas, v3.n.2). As an example, the roles of the US government in the third sector are as follows (Duca, 1996:136):

1. it regulates the NPO sector through incorporation procedures, inland revenue or other regulatory standards;
2. it supports the sector through tax exemption for NPOs, tax deduction for donors etc.; and
3. it is both a funding source and partner in service delivery.

In Hong Kong, private NPOs are similarly regulated (see 'Legal Framework' above). In addition, there are five main types of public organizations supported by the government (as distinguished from PMOs) to provide public services:

1. traditional civil service departments;
2. trading-fund government departments that are asked to shift towards proactive competition, management structure and accounting practice in the private sector, e.g. The Electrical & Mechanical Services Department that provides services to other government departments at

a cost;

3. public corporations with their independence of finance, e.g. Kowloon Canton Railway, Mass Transit Railway. Since they have their own sources of income and profit, the remuneration and other benefits can be better than the government;
4. subvented organizations, these include universities, primary and secondary schools, social welfare organizations, etc. It should be noted that the government in general does not deliver education (except a small number of primary and secondary schools, and non-graduate teacher training courses). The government's role in education is rather to establish a legislative framework, provide funding, and deliver certain support services; and
5. non-departmental public bodies (NDPBs), for diverse statutory bodies such as the Vocational Training Council (VTC), Housing Authority, Trade Development Council, Consumer Council, HK Productivity Council. the HK Tourism Board (previously the HK Tourist Association) and the Hospital Authority. Statutory bodies vary widely in their functions and responsibilities. Their scope of activities and financial and constitutional relationships with the government are set

out in their terms of reference and the ordinances under which they are created. Nonetheless, whatever their relationship with the government, it is ultimately the government which is answerable for the activities of that body. Therefore, many major developments in policy are subject to the approval of the government in Council. Also clear and comprehensive objectives must be mutually agreed between the appropriate Policy Secretary and the GB of the statutory body.

Although many social scientists do not agree on a definition of a nonprofit in contrast to a public service (Kramer in Voluntas. v.2..n1 and v.10.n4; Lester *et al.* in Voluntas, v3.n.3; Morris in Voluntas, v.11., n.1; Duca, 1996), the Hong Kong Census and Statistics Department has conveniently grouped the last two under the category of nonprofit sector.

Government Funding

In the last decade or so, the sources of funding have become a sector-wide issue of NPOs worldwide (Burnham, 1988; Lester *et al.* in Voluntas, v3.n.3). In the USA and UK, the trend in government funding is towards more well defined service areas. Government may require the NPO to expand its service areas, client base, or even types of services as a condition. While NPOs may perceive the eligibility criteria as a threat to

their autonomy; once a dependence on government funds is developed, NPOs would find it difficult to terminate the relationship. This funding arrangement also forces the GBs to become more political, and take on the various roles of facilitator and political advocate by articulating values, missions and self-set priorities (Duca:1996:137).

Like USA, Hong Kong is also moving from the welfare state model (still the norm in Western Europe) to the non-profit based model (SCMP, 30.6.02:Issues 5), with a large network of private organizations heavily supported by the government and complemented by government delivery of services (in USA) (Eva Kuti in Voluntas, vol.1, no.1). Since 1970s, the Hong Kong Government had started to provide more funds to schools, hospitals, housing, social welfare and charitable organizations that met certain requirements. Such requirements were usually prescribed in Ordinances or Memorandums of Understanding. One such restriction on subvented voluntary bodies, primary and secondary schools and tertiary institutions is that its remuneration of their employees cannot be better than civil services. This restriction affects about 152000 employees in subvented organizations, non-government organizations (NGOs) and government schools.

Government funds come in five conventional modes of recurrent subventions as follows:

1. Modified Standard Cost System: the standard cost is based on Personal Emoluments calculated at mid-point salaries of the recognized posts. Within this limit of provision, NGOs are allowed the flexibility in employment of staff.

2. Model System: subvention is provided on the basis of the recognized cost of the unit which is adjusted for inflation annually.

3. Lump Sum Grant (LSG) Mode: aiming to enhance accountability and improve cost effectiveness, the government has put in place the LSG system with effect from 1.1.2001. Units are subvented on a lump sum basis. Under this system, there is no clawing back of surplus. Any savings will be kept as reserve for new services. For example, the VTC has been funded from the start by an annual one-line block vote for all recurrent expenditure with the assurance on the level of funding for the following two years. This arrangement thus combines the standard annual basis with a triennial system. In receiving a General Revenue subvention not linked to specific tax or levy, VTC resembles other subvented bodies such as the Productivity Council and Consumer Council, which also submit annual

programmes and estimates to support requests for funds. Unlike VTC, the executive arms of other subvented bodies have from the start been entirely separate from the civil service.

4. Subsidy Scheme: for purchasing social welfare services from organizations, a fixed unit cost has been agreed in the form of a contract signed between the Social Welfare Department and the NGO administrator. There is neither topping up of deficit nor clawing of surplus.

5. Five Percent Subsidy: Aided childcare centres receive subsidy equivalent to 5% of the approved fee based on the approved capacity of individual centres.

For the social welfare sector, the system of funding has evolved over a period of more than 30 years. By 2002-2003, out of more than 180 NGOs under the Social Welfare Department, 150 have participated in the LSG system, and the subvention for these NGOs represents 96.4% of the total recurrent subvention. For those NGOs in the social welfare sector that have not yet decided to join LSG system, they will continue to receive their funds under the other modes (Editorial, Mingpao, 16.5.2002:A2). The total income sources for social welfare bodies in HK are distributed

thus: government, 64% of which 85% is for salary; Lottery Fund, 5%; Jockey Club and Community Chest, 5%; donation, 5%; and the rest from service users and other sources.

According to the base figure in the 2000 report of the Inland Revenue Department, corporate donations in Hong Kong amount to $850million. As little information on private donations is available, the government's Central Policy Unit estimated a total of up to $1.4 billion in the same year. In other words, local corporations contribute about 0.2% of their profits to charity. As a comparison, donations in HK amount to only 0.2% of GNP; but amount to 1.8% in USA and 0.5% in Canada (*ibid.*). Many individuals in Hong Kong still think that the government should provide basic services, e.g. homes for the aged, which traditionally receive money from the Community Chest.

It is worth noting that while a large number of charitable and other private sector organizations receive subvention from the government for the provision of services; an element of government funding does not, by itself, imply that a body is an NDPB.

Subvented Organizations

As regards scope of operations, many of the subvented organizations are

regulated by their own Ordinances, In the Ordinances are generally stipulated:

1. the interpretation of terms,
2. registration, incorporation and dissolution requirements: such as constitution, address of office, and list of names of members;
3. objectives and functions including the frequency and procedures of board meetings;
4. composition of the GB;
5. power of the governing bodies in property, contract, staff and other human resource issues;
6. use of funds including borrowing, soliciting and accepting financial contributions (grants, donations, fees, rents interests), making investment; and
7. prohibition against the payment of dividend or bonus. e.g. in the Ordinances for the Baptist Church, Caritas, Mun Sang College, St. Paul College, HK Institution of Engineers, Yan Chai Hospital

Under the category of subvented bodies, certain NPOs are subject to more stringent requirements. For instance, the Temples Ordinance stipulates that the Chinese Temples Committee, the GB, must have as its members

the Secretary for Home Affairs, directors of Tung Wah Group of Hospitals, and six members appointed by the government. For others such as the Chinese University, the Community Chest, Red Cross, their Ordinances require their annual account to be audited, either by qualified auditors or the government's Director of Audit, before presentation to the GB.

Non-Departmental Public Bodies, NDPB

NDPB are bodies operating at arm's length from and entrusted by the government to provide a public service. They are perceived to be able to do so more effectively and flexibly (and where appropriate, more profitably) than is possible within the constraints of the civil service. An NDPB normally has the following characteristics:

1. it is formally constituted with its terms of reference or functions clearly laid down in an ordinance, with defined membership, a chairman, etc. For example, the 1982 VTC Ordinance gives its objects, roles, executive functions, activities and the relationship between the controlling officer/policy branch (EMB) and the executive agency (the Vocational Training Council, VTC).
2. some or all of its members are appointed by the government.

3. it is accountable to the legislature for their spending of public funds in two ways. First, the Finance Committee of the Legislative Council (LegCo) can query the provisions sought in the form of triennial estimates. Secondly, the NDPB has to submit an annual report with audited accounts to its GB, before presentation to the Chief Executive and his delegates, and LegCo. The Director of Audit is empowered to examine 'the economy, efficiency and effectiveness with which the NDPB has used its resources'.
4. Some of the NDPBs are financially independent, e.g. the Housing Authority; others like the VTC are controlled by the Public Finance Ordinance that prescribes the role of the controlling officer for the subvention. The latter group of NDPBs receive their grants from the LegCo based on their triennial estimates (see point 3 above). However, their employees are not civil servants (before 1997, they were not agents of the Crown) (EMB, 1992). Through the controlling officer, the Finance Bureau and the Director of Audit; the government is able to prioritize bids and influence the policy of the NDPBs.

Because a public service is involved, and because (unless it is a purely commercial operation) the funds to provide the service come from the

public, it is ultimately the government which is answerable for the executive agency's activities and performance. The government must therefore ensure that the service continues to meet a public need, and that the agency does so cost-effectively. If not, the government can determine whether the NPDB should continue to exist.